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RUARK MR1  
SPEAKERS

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# Android magazine™

» App reviews » Tips & advice  
» Hardware tested » Hacking

# 3 LOLLIPOP SECRETS

» Find out how to get Android 5.0 on any device  
» Hidden features revealed » Problems licked



## BEST TECH FOR 2015

Top phones, tablets, apps and accessories revealed

**MASTER YOUR EMAIL** Top tips for your inbox

### GALAXY NOTE 4

Is Samsung's new phablet worth writing home about?

**ip**  
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# 10

**HACKS TO BOOST  
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» Unlock secret Google Now cards » Remap buttons





# SAMSUNG



Introducing the  
new Samsung NX1  
SMART CAMERA with  
UHD 4K video.



- Redefine image quality with the 28MP BSI APS-C CMOS sensor
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## FIND YOUR SIGNATURE

Samsung SMART CAMERA **NX1**

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Android devices on test

## Moto X (2014)

"The phone just  
screams premium"



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## Samsung Galaxy Note 4

"The most refined  
Note yet"



p78

## Dell Venue 8

"one of the best budget  
tablets around"



p77

# Welcome

"A surprise launch was the Nexus Player, the first set-top box to run Android TV, allowing users to access Play Store apps and games via their telly"

## MY HOME SCREEN

On (and off) Jack's  
phone this month...



Google Fit



Endomondo



Udacity - Learn  
Programming



The Wolf  
Among Us

This month  
I've been using:  
Moto G (2014)

A bigger screen is a  
nice addition to this  
budget buy, but why  
did they remove 4G?



Angry Birds  
Transformers



Google surprised everyone  
when it launched not one but  
three new Nexus devices.

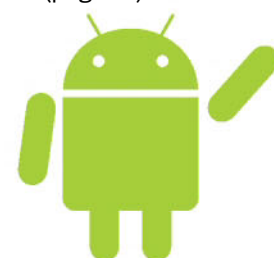
We all expected the Nexus 6  
smartphone (though who thought it  
would be so big?!), but it was a  
surprise to discover the cutting-edge  
Nexus 9 tablet was to be  
manufactured by HTC rather than

Asus this time around. While HTC's metal One M8 handset  
is critically acclaimed, the company has not produced a  
tablet for years. Still, with a lightning-fast Nvidia Tegra K1  
processor, lots of RAM, and running the brand-new  
Android Lollipop OS, what could wrong? Find out if HTC  
was up to the challenge in our in-depth review on page 74.  
The other surprise launch was the Nexus Player, the first  
set-top box to run Android TV, allowing users to access  
Play Store apps and games through their telly. What does  
this mean for Google's other streaming device, the  
Chromecast? Find out on page 6.

If you've updated to Lollipop – or want to know how – our  
30 Lollipop Secrets article is here to help you (page 18  
onwards). Packed with top tips and step-by-steps, it will  
reveal Android 5.0's hidden features and troubleshoot  
your problems. For extra advice, don't forget to check out  
the rest of our tutorials, including how to get the most  
from your email, remove junk files, and what hacks to use  
to boost your phone signal.

Looking for stocking-fillers? Check out our gift guide on  
page 86, and don't forget to enter our competition to win  
one of two Ruark MR1 hi-fi speakers (page 11).

Jack Parsons



Jack Parsons  
Deputy Editor

## GET IN TOUCH

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for even more news

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# Launcher

All the latest from the world of Android devices



It's never been easier to stream movies and music to our televisions.

THE **big** STORY

## Will the Nexus Player kill the Chromecast?

What Google's new premium media player means for the future of the streaming stick

**T**he Chromecast has been a small but significant hit for Google: easy enough for your parents to set up, cheap enough to become an impulse buy, and with an obvious purpose that it accomplishes well – namely, getting content from your smartphone, tablet or computer up on a television screen. Not too long ago, getting video from your laptop to your living room TV required an IT qualification and some expensive streaming technology, but now there are a pile of compact boxes that make the process much more straightforward, and Google's Chromecast is the cheapest and the simplest of the lot.

The Chromecast has plenty of competition, such as the Roku and the newly launched Amazon Fire TV Stick, which might be why Google has decided to bring out what is essentially a Chromecast Plus:

the Nexus Player. It does everything the Chromecast does, but it has an Android Lollipop-powered interface of its own, letting you delve into your music and movies from your couch with no other device required. It's still heavily reliant on the web though, like Google's Chromebooks, and you won't be able to store your box sets on its rather paltry 8GB of internal storage.

Is Google prepared to take the hit and have its Nexus Player supersede the Chromecast? Or does it imagine both devices existing side by side? For the time-being at least, Google is confident that these two streaming gadgets can both be successful at the same time: the company is "building an ecosystem of different endpoints" said VP of Product Management Mario Queiroz at Gigaom's Structure Connect conference, and "any

Google Cast-ready application will work on any Google Cast endpoint." Google Cast is the technology underpinning the Chromecast, and that means users will eventually be able to cast content from any app to any compatible device – it would seem that Google doesn't mind if you're using a Chromecast or a Nexus Player as the final part of that equation.

For Google, the Nexus Player allows it to offer a more advanced alternative just as the initial interest in the Chromecast is starting to ebb. "Given [the Chromecast's] low price, many consumers purchased one and began experimenting with it, producing high initial use," says Brett Sappington, Director of Research at Parks Associates, who looked at usage patterns for the device. "Over time, however, owners developed



# Chromecast vs Nexus Player



Price **UK £30 / US \$35**

## technical specs

» Dimensions.....	72 x 35 x 12mm
» Weight.....	34g
» Display resolution.....	1080p (1920x1080)
» Connectivity.....	802.11b/g/n Wi-Fi
» Memory.....	512MB RAM, 2GB storage
» Processor.....	Marvell DE3005-A1

### Pro

Small, simple and cheap, the Chromecast makes getting content on your big-screen TV a breeze.

### Con

It can't do much by itself, so you need to bring a smartphone, tablet or computer with you.

Price **UK TBC / US \$99**

## technical specs

» Dimensions.....	120 x 120 x 20mm
» Weight.....	235g
» Display resolution.....	1080p (1920x1080)
» Connectivity.....	802.11ac Wi-Fi, Bluetooth 4.1
» Memory.....	1GB RAM, 8GB storage
» Processor.....	1.8GHz quad-core Intel Atom

### Pro

A standalone box, albeit one heavily reliant on a Wi-Fi connection to show any content.

### Con

Adding gaming capabilities to the box requires a special gamepad for an additional cost.



a better understanding of Chromecast's usefulness and appropriate niche in the video-viewing environment. Some continue to use Chromecast regularly, while others are choosing different options to get online video to their televisions."

And now those "different options" include the Nexus Player – a customer who might previously have plumped for the Apple TV as an upgrade from the Chromecast now has a fully fledged Android 5.0 Lollipop competitor to consider. It may cannibalise sales of the Chromecast at the same time, but it looks like Google is ready to take the risk as it looks to expand its reach in the home theatre market.

As one of the key differences between the Chromecast and the Nexus Player, it's worth looking at the Android TV interface built into Android 5.0 Lollipop. In line with the bold, clean, card-based interface ushered in by Lollipop as a whole, Android TV uses blocky and colourful elements and is designed to be operated from a living room couch. "Personalised content recommendations from Google Play, YouTube and your apps appear automatically in your home screen," says Google. "The remote app offers

**"Any Google Cast-ready application will work on any Google Cast endpoint"** Mario Queiroz  
VP of Product Management, Google

voice search and an on-screen keyboard, giving you full control of Android TV from your phone or Android Wear watch." It can also be controlled using voice input, and the software will be appearing on televisions from Sony, Sharp, Philips and TP Vision in the near future in addition to the Nexus Player.

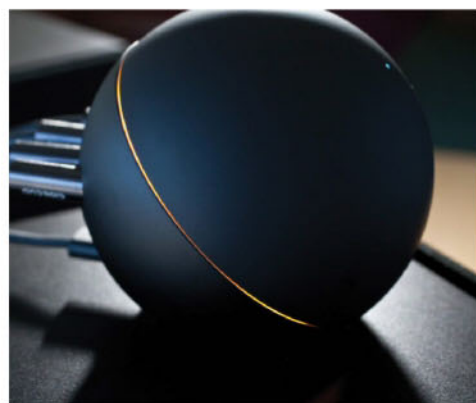
Google has also been keen to push the gaming capabilities of Android TV and the Nexus Player, another of the areas where it offers something distinct from the Chromecast. Senior Google executive Sundar Pichai described the Nexus Player as "a first-of-its-kind Android gaming device" as the company announced its arrival. "With Nexus Player you can play Android games on your HDTV with a gamepad, then keep playing on your phone while you're on the road," he added, though you will have to pay an extra \$39 for the gamepad (UK pricing has yet to be announced, but that's roughly £24 with a straight currency conversion).

As mentioned, Android TV is essentially running on top of Android 5.0 Lollipop, and Google says that any Android app can potentially run on Android TV, provided it includes the necessary code tweaks and updated visuals to run on a huge screen. Games are the most obvious contenders for an Android-to-Android-TV upgrade, but in theory almost any app – from Facebook to Google Drive – could be adapted for the platform. This would be another area where the Nexus Player justifies its extra cost when compared with the Chromecast.

Before Android TV came Google TV, the Mountain View company's previous attempt to dominate the living room. After sales of Google TV boxes fell flat – and cable companies blocked access to their content – Google is taking a web-focused, Android-based approach to the problem this time around. "We see a great opportunity to bring some of the strong capabilities of Android – such as voice input, user experience and content – to the largest screen in your house," said Google's Dave Burke at this year's I/O keynote as he unveiled the Android TV platform. Like Android Wear and smartwatches, Android TV and the Nexus Player take Google's mobile operating system in a new and potentially lucrative direction.

Not everyone thinks Google's multi-pronged strategy is going to work, however. Writing an

## What happened to the Nexus Q?



The Nexus Q was an early attempt at an Android media player, which appeared at Google I/O in June 2012. But even its makers never seemed sure of its success – unlike the Nexus phones and tablets, it was manufactured by Google itself, but the device wasn't heavily promoted and proved very difficult to get hold of. A high price (\$300/£188) and limited functionality (it could only access content from Google Play and YouTube) meant that it didn't stand much of a chance in a competitive market, and Google pulled the plug even before the device officially went on sale. In the end it seems the company simply used it as a trial run for the Nexus Player.

**"Some continue to use Chromecast regularly, while others [chose] different options"**

Brett Sappington

Director of Research, Parks Associates

## Chromecast by the numbers

The vital stats for the tiny streaming device

**30,000**

The number of retail stores stocking the device in the US

**650 million**

The number of times users have cast using Chromecast

**100,000**

The number of Chromecasts Google sold in the first two months in the UK

**10,000**

The number of Google Cast apps in development

**6,000**

The number of developers working on Google Cast apps

**250**

The number of apps that currently support casting

**“You can play Android games on your HDTV [...] then keep playing on your phone”**

**Sundar Pichai**

Senior VP (Android, Chrome & Apps), Google

opinion piece in *Forbes* magazine, Ian Morris describes the Nexus Player as an “utterly nonsensical” device: “Those who want to stream from their Android Netflix app already have a Chromecast, what on earth is going to persuade them to buy this?” he asks, while admitting that the Nexus Player does offer more capabilities for

gaming and watching content without a separate device. On paper the Chromecast does offer better value, but it’s also more limited, which may be why Google has decided to take the plunge with the launch of the Nexus Player.

To all intents and purposes the Nexus Player is going up against the Apple TV rather than Google’s own Chromecast: both boxes attach to an existing television set, both play happily with other mobile devices around the home, and both let users browse for content through a stylish, stripped-down interface. The Chromecast may be a third of the price but it also offers a less complete experience, and it looks like Google is confident there are two (or more) types of buyers out there.

Personalisation is another reason why consumers may opt for – or avoid – the Nexus Player. The Android TV interface surfaces movies,

shows and music you’ve previously enjoyed or run searches for, offering the same kind of intelligent guesswork that characterises Google Now. Chromecast, in contrast, is nothing more than a dumb dongle ready to do your bidding, with no on-screen interface of its own save for a slideshow of photos that appears when nothing is being played through the device.

For those who already have a Chromecast, the Nexus Player might not be a compelling upgrade; however, for those who haven’t yet picked up a device of any kind for their living room, Google’s newest television box could just be tempting enough to get them to part with their cash. At the very least, it looks to have a better chance of succeeding than the Nexus Q and Google TV, two missteps that Google will be looking to move on from as quickly as it can.



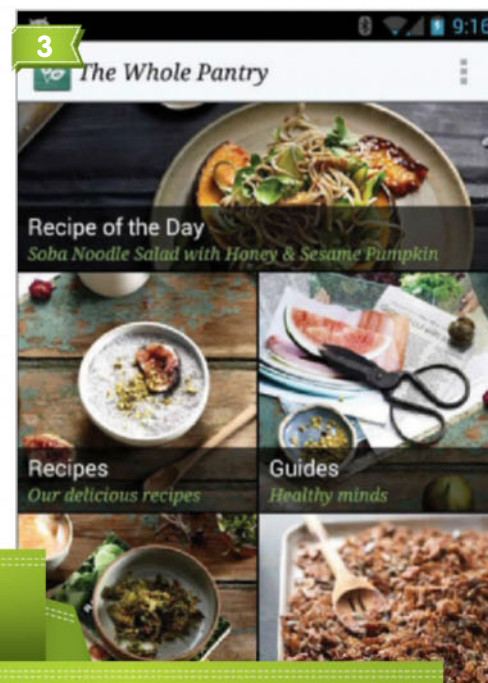
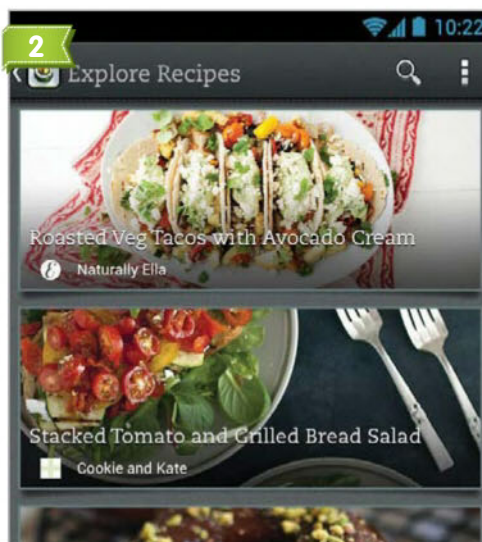
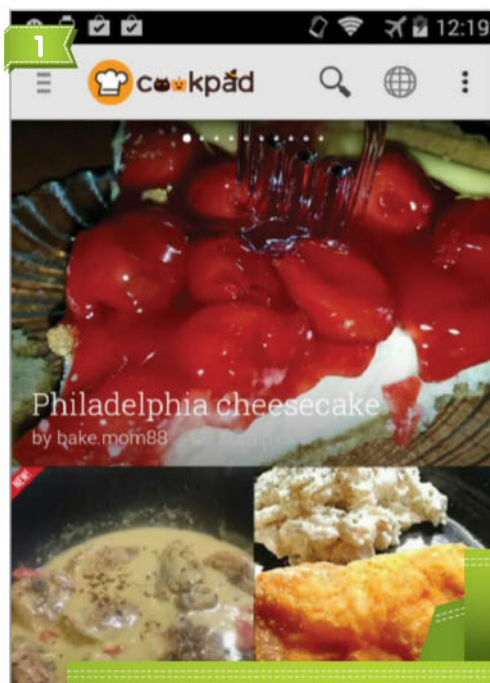
## Stay up to date

Catch up with the latest  
Android news and gossip

» **twitter**

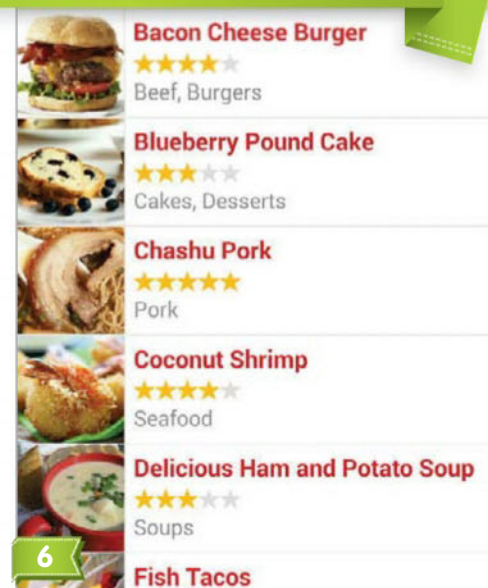
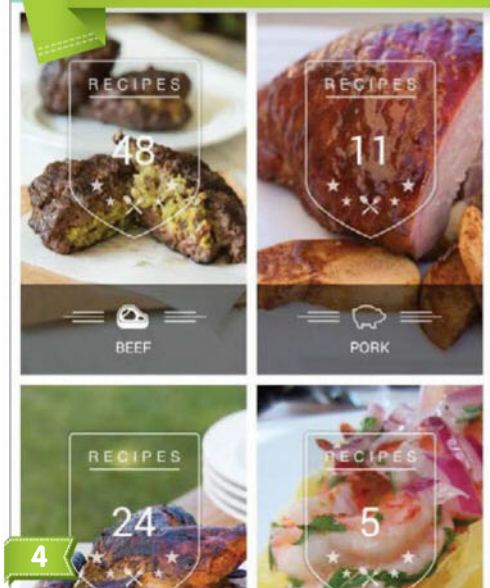


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## GALLERY OF...

# MOUTH-WATERING RECIPE APPS



### 1 Cookpad Recipes

A social network for sharing your most experimental recipes, its rating system ensures the best dishes – and succulent photography – stay on top, while basic entries fall to the bottom. An intuitive, elegantly designed app.

» **Price:** Free

### 2 Evernote Food

This download leverages Evernote's databasing skills to create a scrapbook of both your own recipes and those created by other users, as well as recording your favourite restaurants – you can even book tables in-app.

» **Price:** Free

### 3 The Whole Pantry

Geared around healthy eating and with only 52 recipes, this app is fairly limited. However, the featured photography is fantastic and extra features, such as a reading list of books for foodies, more than compensate.

» **Price:** £1.75/\$2.99

### 4 Caveman Feast

Caveman Feast promotes the 'Paleo diet,' which cuts out cereals and processed food. Not only is it packed with pictures, but titles and key details appear as stylish transparent overlays, giving it a very polished feel.

» **Price:** £1.83/\$2.99

### 5 Cooklet

A clean interface makes Cooklet easy to navigate, but it also responds to voice commands to jump between instructions and ingredients so that you don't get your touchscreen dirty while cooking. Helpfully, instructions can also be read aloud.

» **Price:** Free

### 6 Paprika Recipe Manager

A staple of the Play store, Paprika's design is starting to look a bit dated. However, it remains one of the easiest ways to collect all of your own recipes, along with those you find around the web, in one place.

» **Price:** £3.05/\$4.99



## NEW TECH | Bluetooth luggage

# Bluesmart

## A smarter, more secure way to travel

**N**obody can deny that going on holiday is fantastic, but not so much when your suitcase has been lost by your airline. However, the Bluesmart suitcase looks to change all of that through a series of wireless features that keep the contents of your luggage from falling into the wrong hands. Rather than requiring a padlock that can be easily cut off, this super suitcase's locking system is controlled entirely with your Android smartphone. This same smart tech will also send SMS alerts if it senses you're too far away from the case, and can also be used to track the whereabouts of the case if it goes missing thanks to the addition of a GPS sensor.

For those long waits at the airport or if you forget your travel adapter, the Bluesmart also has a built-in phone charger to ensure your handset is at full strength. The Bluesmart suitcase is an ideal piece of kit if you're travelling with expensive items, or simply prized possessions that you care about.



### At a glance

- » **Product name** Bluesmart
- » **Available from** [www.bluesmart.com](http://www.bluesmart.com)
- » **Price** \$195

Bluesmart is a carry-on suitcase that provides users with tools to lock, unlock and weigh the case remotely via their smartphone.

Owners can use the built-in charger to give their devices a boost while on the go

The Bluesmart includes a proximity sensor that acts as a wireless locking and unlocking system between the case and your smartphone



Thanks to the distance alerts feature, users will be notified via SMS messages when they travel too far away from their bag

Bluesmart also has a unique digital scale so users can see exactly how much their bag weighs, to avoid check-in delays

## Q & A



### Brian Chen

Co-founder

#### How did the idea of the Bluesmart suitcase come about?

**A** The idea for Bluesmart came after one of the founders had a terrible experience with his suitcase on a trip to Argentina. The airline forced him to check his bag, which then was lost by the airline. Although he finally recovered it, his trip turned into a nightmare with him worrying [about] his valuable belongings for several days. He thought that with all the technology that we have available today, we should be able to do better. After sharing the idea with some friends with expertise on industrial design and manufacturing, we decided to design the suitcase of their dreams.

#### Could you tell us more about how the suitcase can be tracked if you get too far away from your luggage?

**A** The app measures the strength of the Bluetooth signal and translates this into a distance proxy, creating a sort of heat map of proximity. You can therefore set a minimum distance that you want to be alerted for. This works within a range of approximately 100 feet. If you get completely separated from your Bluesmart, you can tap into the Bluesmart Network of Bluetooth connected devices (including the Bluesmart suitcases plus other third-party devices) to track the location of the suitcase.

#### How does the digital lock work?

**A** The Bluesmart Lock [features] a two-position solenoid that can be controlled digitally to lock or release the latch through a low-energy electrical pulse. Then, via the Bluetooth communication between your smartphone and the microcomputer

inside the suitcase, you can give the order of locking and unlock through the app. Also, you can set up the lock to be unlocked whenever you are close to your suitcase, while locking automatically when you move away.

#### How does the suitcase provide you with travel data?

**A** The suitcase carries different sensors and a GPS module that track the location of the suitcase and different events during your trip, including the lock activity, the case's weight, the battery charge and more. We process that data to provide users with information and trends about their travel habits. Additionally, by combining this data with data from other travel services we can provide smart notifications and reminders to the user, like when and what to pack. We will always ask users permission to track data, and will keep it safe and protected with best-in-class security tools.



WIN!

# RUARK MR1 BLUETOOTH SPEAKERS



**W**ith a walnut finish, metal fittings, and mesh grilles, the Ruark MR1 speakers look great – but they sound even better.

Ruark is well known for its hi-fi systems and at £299, the MR1 speakers happily fit sit between the full home sound system and portable Bluetooth speakers. From the low-end to the treble, it's easy to appreciate a full musical range thanks to a hand-crafted bass reflex, tuned and damped enclosures and 75mm woofer with powerful neodymium magnet

system. Even when streaming from Bluetooth rather than the wired output, aptX coding technology gives it CD-quality sound, with rich depth and clarity.

The Ruark M1 speakers are designed for home use, but at only 17cm tall and with an optional 'Backpack' rechargeable battery pack and leather 'Carrypack' with leather handle sold separately, there is no reason why you can't take them with you – though at 3kg you may only want to go as far as your garden.

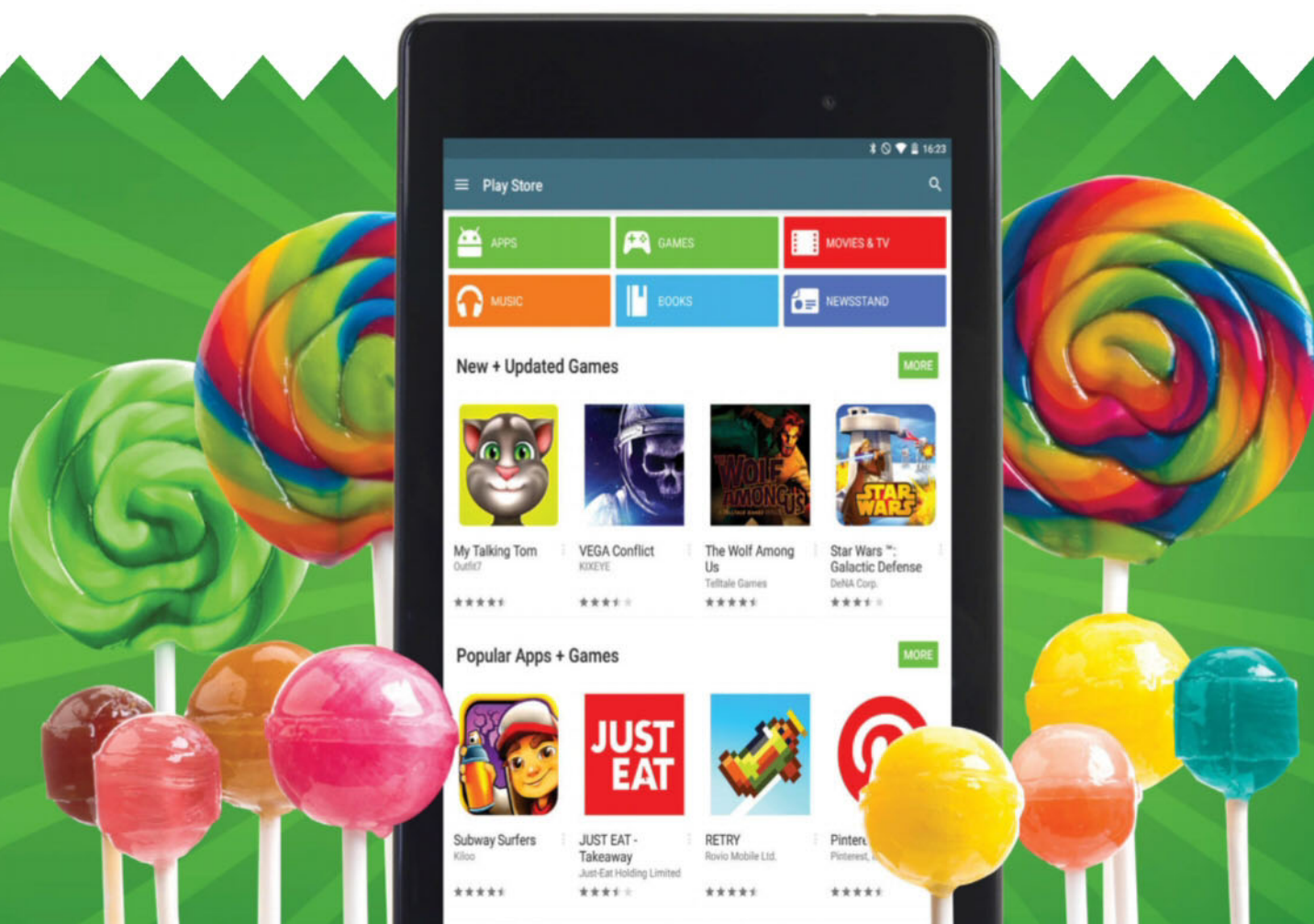
**For your chance to win one of two Ruark MR1 speaker systems, head to [www.littlegreenrobot.co.uk/ruark-mr1-speakers](http://www.littlegreenrobot.co.uk/ruark-mr1-speakers)**

**For more information visit [www.ruarkaudio.com](http://www.ruarkaudio.com)**

\* Competition closes 25 December 2014. For full terms and conditions visit [www.littlegreenrobot.co.uk/ruark-mr1-speakers](http://www.littlegreenrobot.co.uk/ruark-mr1-speakers)

# 30 LOLLIPOP SECRETS

Get to grips with some of the best hidden features in the new operating system update



**L**ollipop is the biggest update to the Android operating system that we've seen since Ice Cream Sandwich was released back in 2011. Whereas the likes of Jelly Bean (Android 4.2/4.3) and KitKat (4.4) focused on ironing out some of the problems that had littered the operating system for some time, Android 5.0 has completely revamped the way in which we use and enjoy our Android devices, bringing new features and a new look with it.

Although Google Nexus smartphone and tablet owners will already be well underway enjoying everything that Lollipop can offer, many other

Android users will be eagerly waiting to get their hands on the update – with some devices rumoured not to be getting Lollipop until towards the end of 2015; or in some cases, never. But put those fears aside, as we're on hand to guide you through how to install the Android 5.0 SDK and start exploring Lollipop's new features straight away.

With such a dramatic overhaul, it would have been easy to point out the superficial changes that most users will find on their own. Instead, the following pages are aimed at helping you discover some of the best Lollipop features that take a little

big of digging to uncover. The new Material design language is fantastic for making apps and menus look clean, but they also contain tons of side-menus that need to be explored to really uncover everything that Android Lollipop is capable of.

As well as revealing some of the secrets that can be found throughout the various menus of Lollipop, we've gone hands-on with each of the updated Google apps to explore some of the exciting extras hidden away within them. If you manage to find any further hidden extras when using Lollipop, let us know by tweeting us via @lgrobot.

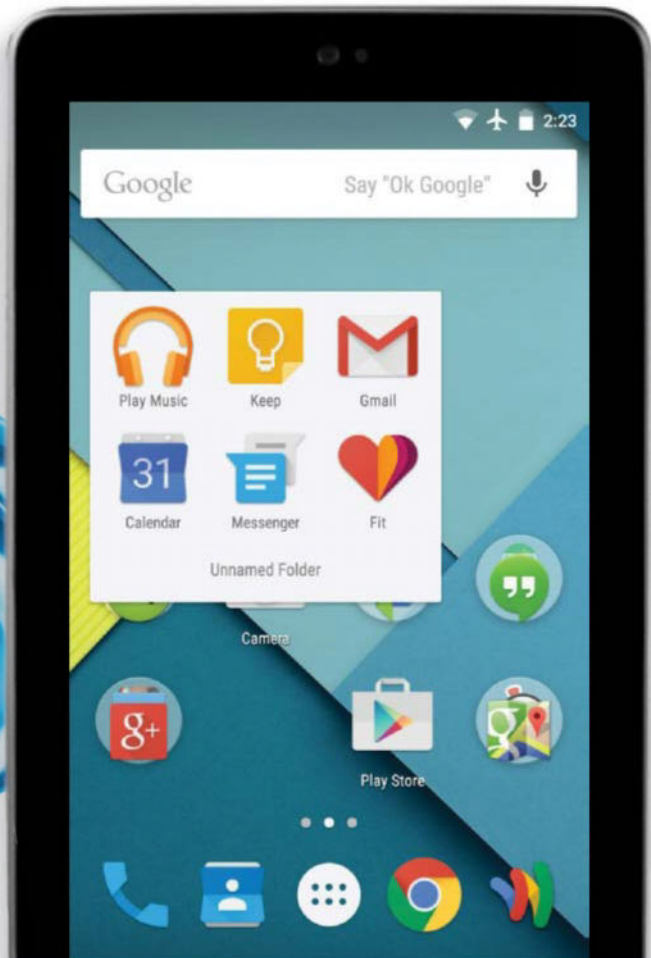


# Get Lollipop on any device

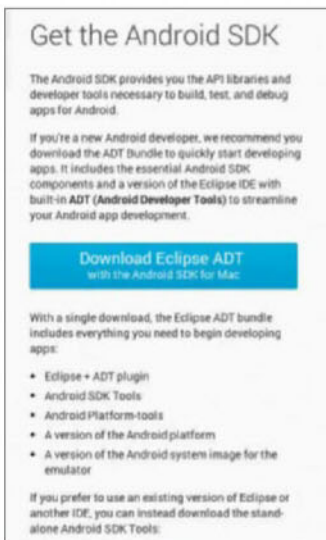
Use the Android SDK to get your hands on Lollipop right now

Unfortunately for a lot of people, you'll be waiting some time for the official Android Lollipop update to hit your device – and for some, it may never arrive. Although built primarily for developers, the Android SDK is perfect for those who want to get to grips with the new system update right away. At first it can be quite a daunting experience getting it up and running, but by following the steps provided, you should be up and running with Android L on your device in no time.

“The Android SDK will let you get to grips with the new system update right away”



# Install Android 5.0 using the Android SDK



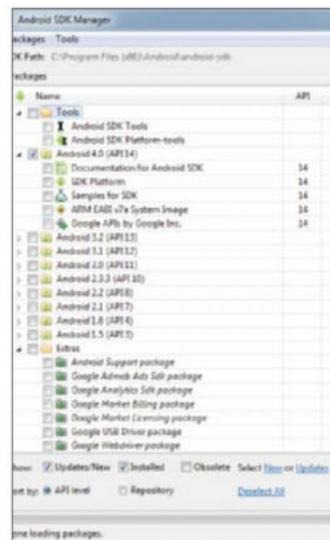
## Download files needed

On a computer, go to the XDA Forums ([forum.xda-developers.com](http://forum.xda-developers.com)) and find the SDK Manager and Android 5.0 SDK. Download both files and install them on your computer. The files are fairly large, so this will take a while to fully complete.



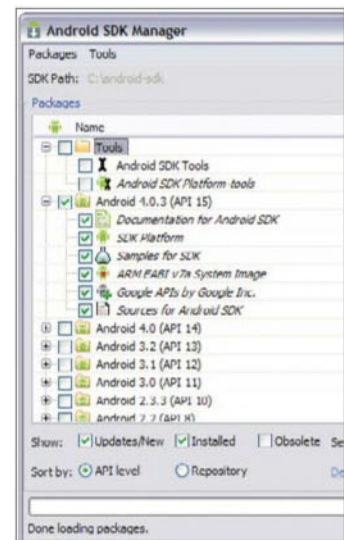
## Get the tools

Go through the entire installation process of the SDK Manager program, following the steps. Once done, use the toolbar to find the Tools section that will be listed. By default, most of these options are listed alphabetically.



## Manage installs

With the Tools section open, use the sidebar to locate the Android L SDK files. Use the checkboxes next to each of the files to make sure that each one is selected, before pressing the provided Install button.



## Accept and install

A licensing agreement will now appear for you to read through and agree to before installing. One that's been confirmed, the install will begin. Make sure that your connected device is fully charged, as the install will take a while to complete.

# Get a better battery life



There's an incredible selection of options for users to track their device's battery life



## 1 Check your percentage

If you want to take a quick look at how much battery life you've got left, use two fingers to swipe left on your screen. This should open up the Quick Settings menu if done correctly, where an exact percentage will be shown at the top of the screen.

## 2 Fully charged

Although the charging times for devices vary, once you plug your phone into a charger, take a look at the bottom of your lock screen. Tucked away you'll find an estimation of how long it will take for your device to be fully charged. This feature can take a few minutes to calculate, depending on the device you're using.

## 3 What's eating you?

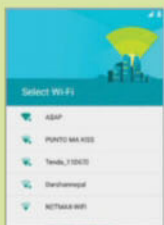
Use the two-finger swipe to once again open up the Quick Settings menu. Instead of manually scrolling through the options provided, swipe down and select the battery icon. This will take you to fairly well-hidden Battery Status screen where you can see how long your battery has left, and the apps that are draining it the most.

## 4 Power Saver mode

Follow the step above to get to the Battery Status screen and once there, press the Menu button on your device. From here you can toggle the Power Saver mode, which ultimately will streamline your battery's performance when you hit the 15 per cent mark. You'll find the entire look of the battery screen will turn orange once this is activated.

## 5 Metered Wi-Fi

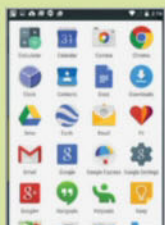
Open up the Network Restrictions menu hidden away within the Data Usage screen in Settings. Users can now create their very own metered network, whereby certain bits of background data will be



restricted. Your phone will also notify you of any large downloads, or syncing tasks that could use a lot of data.

## 6 Disable auto app icons

One of our pet hates with Android was the app icons that would appear on our homescreen every time a new app was installed. However, the Lollipop update rectifies this problem by enabling



users to go into the Play Store app and disable the option from within the app's Settings menu.

## 7 Play Flappy Android

Every Android update includes a fun Easter egg for users to check out, and the trend continue here. Repeatedly tap the version number of your phone with the About Phone settings until a Lollipop screen



appears. Now press on the screen, where you can now play an Android-themed version of Flappy Bird.

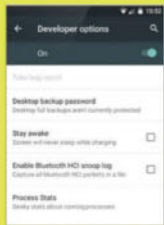
## 8 Create a guest profile

If someone else would like to take your smartphone or tablet for a spin, but you don't want to allow them access to all your files and app, then you'll need to create a guest profile. Head to the Users section and find the guest option listed. This profile will then be available via your device's lockscreen.



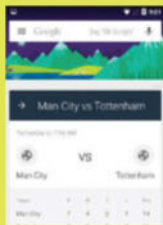
## 9 Stay awake

If you like to keep an eye on your device while it's charging, check out the Stay Awake feature. Go through the Settings menu and find the Developer Options menu near the bottom. From here, turn the toggle to on before enabling the Stay Awake option provided. When charging, your device will no longer turn itself off. It's advisable to turn this feature off when you're trying to sleep, however!



## 10 "OK Google... set a reminder"

Google Now has undergone a massive visual change in Lollipop, but most of the new features are well hidden. The first thing to check out is the Reminders feature; this changes Google Now into a basic alarm system for events and appointments. To find it, open Google Now and tap the Settings icon within the search bar. The Reminders option is at the bottom of the list.





# Do more with notifications

New gestures, instantly hide information and set priority apps

11

## Set a priority app

If you deem certain apps more important than others, head to the App Notifications menu and select a priority app. Your selection will now always be shown on your screen when a new notification arrives from it

## Manage sensitive information

Head to the App Notifications menu within Settings to manage all the apps with access to sensitive information, before toggling the information they can show on your lockscreen within the Sound & Notification menu

## Instant access

Double-tap on any notification to open up the corresponding app, or simply swipe it to the left to remove it from your lockscreen

## Improved security features

Take a look at the new security options you need to use

## 15 Pairing with Wear

Android Wear plays a major part in the new Lollipop update and your smartwatch can prove instrumental in keeping your device safe. Pair them together so the smartwatch can be used to unlock your device.



## 16 Say cheese!

Although not a new feature per se, the Face Unlock capability is a lot more reliable this time around. Make sure to set a PIN or password before activation, just in case you need a backup solution to get into your device.



## 17 Instant locking

Open up the Security menu within Settings and scroll down until you find the Instant Lock option. Activating this will mean that as soon as your phone goes to sleep, your device will lock and you'll need to enter a PIN to gain access.



## 18 Unlock with Bluetooth

Users now have the option to choose certain Bluetooth devices that can be used to unlock their primary phone or tablet. This can be either a safe NFC tag or even the Bluetooth connection used within your car.



## 12 Set some restrictions

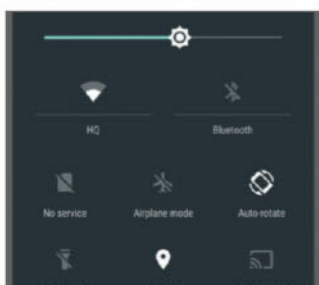
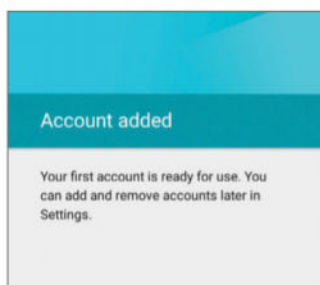
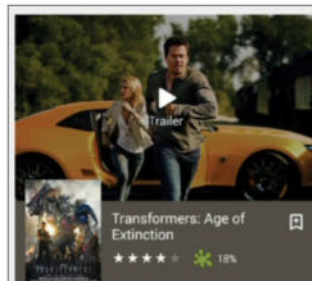
As well as guest profiles, it's possible to create restricted profiles. These are a little more complicated to set up, but can still be found in the Users menu. Restricted profiles enable you to pinpoint the exact apps and settings that other users can and cannot access. Ultimately, they can be as basic or detailed as you'd like, but you'll need to set a password for each of the profiles you create.

## 13 Temporarily stop notifications

There are a variety of reasons why you'll want to disable notifications, but the option is fairly hard to find. Open your notifications menu, press the gear icon and then the Volume button provided. Select the None option that follows, before setting the times of when you want to stop all notifications. If it's a recurring daily time, then make sure to enable the option provided.

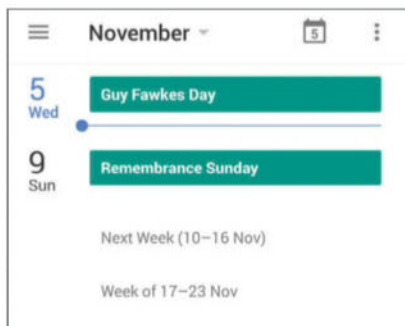
## 14 Enable 5.1 surround sound

Audiophiles rejoice! The Play Movies app now supports 5.1 surround sound, but it isn't activated by default. To bring the noise, open up the app and head into the Settings, where you'll find the Enable Surround Sound option. The differences between standard audio and 5.1 surround sound is astonishing, especially if you're using a Nexus 9 tablet to watch movies on.

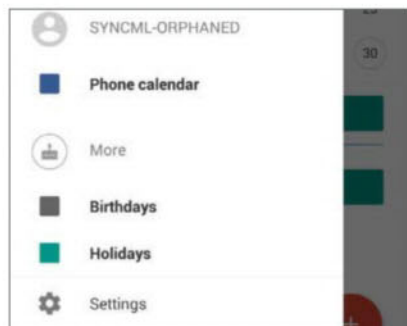


# Calendar

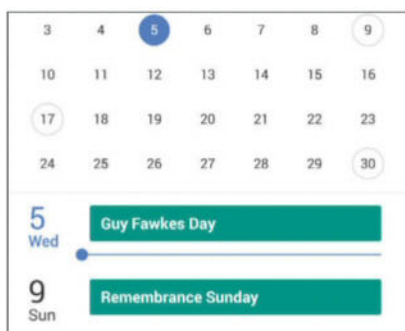
Keep your Google account completely in sync with the redesigned Calendar app



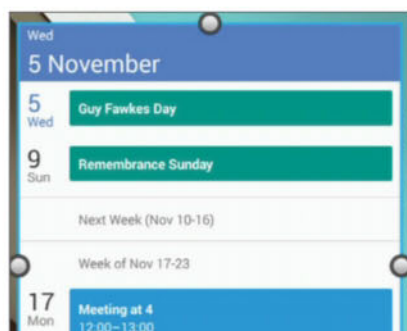
**19** Toggle the planner to add public bank holidays.



**20** Import social media feeds via the app's side menu.



**21** Swipe down on your calendar to open the planner screen.



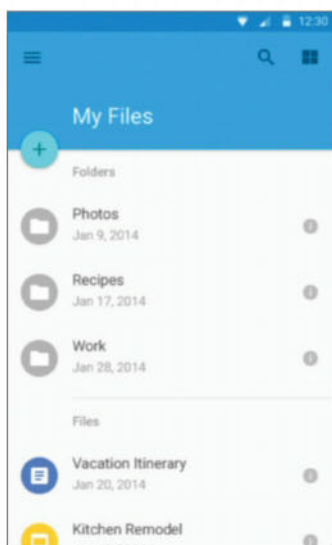
**22** Add the planner screen as a permanent homescreen widget.

When you first open up the updated Calendar app, the first menu you'll be greeted with is a new planner, which can be set up to show some of the upcoming public bank holidays [see number 19]. Past this screen is the calendar; by default it'll look surprisingly bare, but open up the app's side menu and scroll down, where you'll be able to import events and feeds from various social media accounts [20]. After syncing the events to your calendar, select a month from the toolbar to reach the overview screen and swipe down to open the planner menu underneath [21]. You can then import this planner screen onto your homescreen via the widget menu on your device [22].

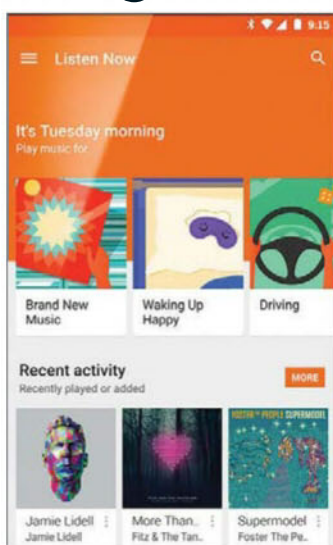


## New-look Google

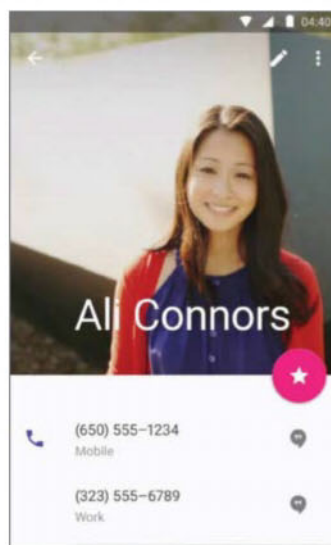
Discover some of the best secrets in the other stock apps



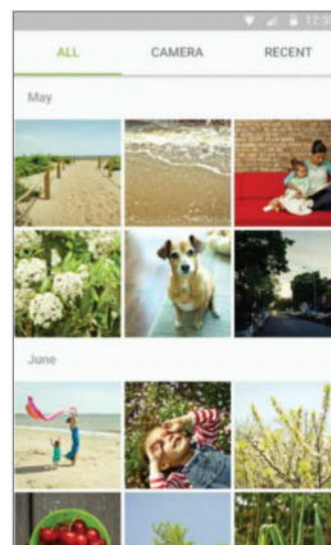
**23 Google Drive**  
Head into the Settings page within Google Drive and find the Drive-enabled apps folder. Here you can play around with the apps that can sync files to your Drive account, with or without a secure Wi-Fi network required. Ideal if you have a limited data usage plan.



**24 Google Play Music**  
To unlock this feature, you're going to need to use Play Music All Access regularly. Eventually you'll find that curated playlists start appearing on the homescreen of your account for you to use. These will be based solely on your previous listening experiences.



**25 Phone**  
While most of the changes in the new Phone app are cosmetic, there are a few great features to explore. By syncing the app with your Facebook account, you can now pick and choose the friends you want to add to your phone's contacts list without it syncing completely.



**26 Photos**  
Albums can be split up in a variety of ways within the material design version of Photos. By default your photos will be shown in chronological order, but the view can be customised to show them in order of any tags and locations you add to your pictures.



# Gmail

## Managing your emails is easier than ever

**27** There's a big emphasis on simplicity within the redesigned Gmail app and while most of the changes are cosmetic, there are some nifty additions hidden away. First, use the side menu to access your primary account, where you can then choose to import other email accounts into Gmail. It's also now possible to move large quantities of emails to a specified inbox all at once, a feature that was surprisingly missing from previous versions of the app.

### Switch or merge?

Users can switch between their imported email accounts through the app's side menu. You can then bring all the accounts together, or simply view them individually

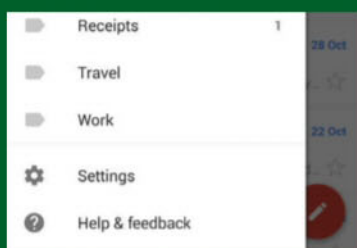
### More options

The number of additional options when you long-press on an email has increased. Users can now use this function to move emails around to a different inbox

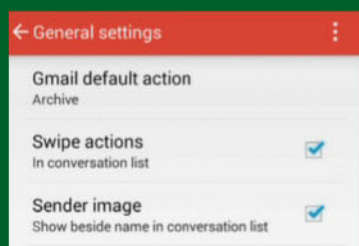
### Start from scratch

The create-an-email button is no longer on the top toolbar, and now requires you to press the large pencil icon at the bottom right of the inbox

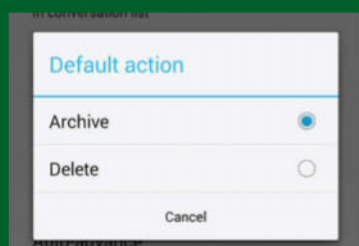
## 28 Change default action for swiping



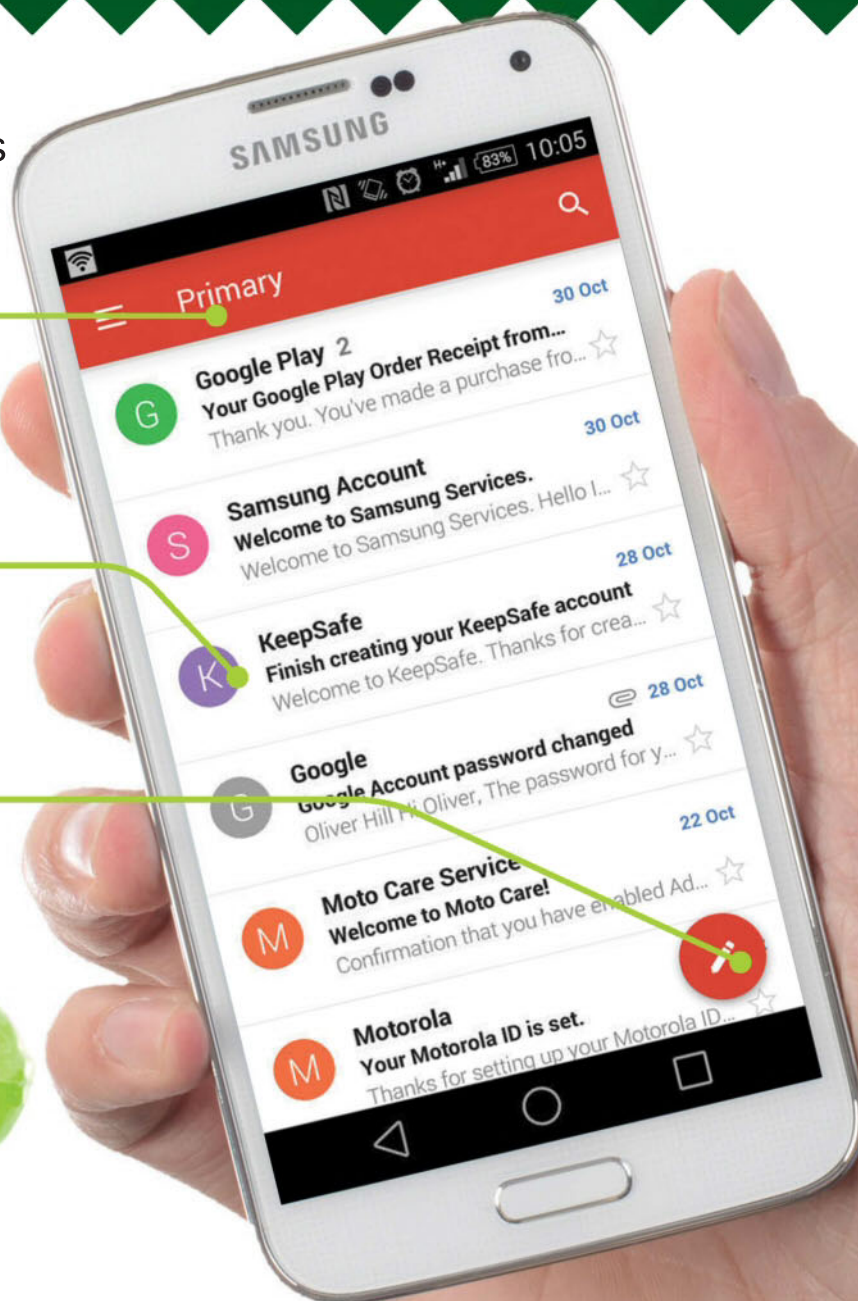
With the default inbox open, press on the icon at the top left of the app to open up Gmail's side menu. Scroll down to the bottom and tap on Settings, before selecting the General Settings option.



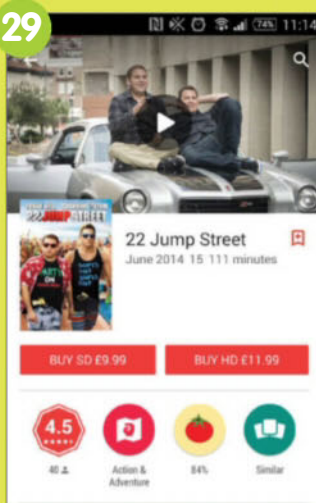
There's an array of new settings and features worth checking out here, but for now you'll want to move around this menu until you find the Gmail Default Action option. Press on the option once found.



Users can now choose between either the Archive or Delete option. The deleting option is self-explanatory, but choosing to archive will move the email into a separate inbox associated with your account.

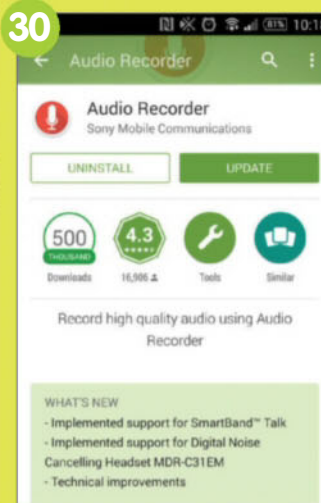


29



Start streaming a movie, and information about the actors and soundtrack will appear.

30



Scroll down an app's listing to find the additions to the latest version in the 'What's New' section.

# Play Store

A new-look hub for your entire device's media files

There are changes all over the place within the redesigned Play Store app, but we've uncovered a few hidden extras. Navigate to the Play Movies section of the app [see number 29] and begin streaming a movie to your TV or laptop. On your phone, you'll now have access to a variety of information about the movie, almost like a second-screen experience. Next, head over to an app that's had a recent update, where you'll now find a separate 'What's New' [30] menu listing all the changes in the latest update.



# ANDROID AWARDS

## THE BEST TECH OF THE YEAR

### The best phones, tablets, apps and accessories of the year revealed

It has been an incredible year for Android. There are now one billion Android users, snapping 93 million selfies, sending 20 billion texts, and checking their phones 150 times every day, according to Google.

The devices that we've been using have also greatly improved, with the release of some of the best and most powerful phones ever produced. Quad-core processors are now standard while octa-core and 64-bit architecture are arriving on Android, such as in the HTC Desire 510 and Samsung Galaxy Tab 10.5. Better still, even with more powerful components and swelling screen size, Android phones are cheaper than ever. As well as the likes of budget handsets like the Moto G and Moto E, Chinese smartphones such as the OnePlus One have been disrupting the traditional flagship market with high-end specs at low-end prices.

Not that Android is just limited to using phones and tablets any more. This year saw the launch of Android Wear, Android Auto and Android TV platforms, along with a range of incredible products to make the most of this software. To reflect this, we have introduced a new 'Best Smartwatch' category into the Android Awards, as well as seeing the return of accessory awards for the leading headphones and Bluetooth speakers.

Over the next six pages we present the fourth annual Android Awards, counting down our picks of the best and most essential phones, tablets, apps and accessories from the last 12 months.





# ★ Best Camera Phone Sony Xperia Z3

Sony's current flagship is unrivalled in the photography department

Thanks to Sony's endeavours in the digital camera market, the camera and video capabilities of the firm's smartphones have always been of the highest quality. The Xperia Z3 brought together some of the latest and best photography technology on offer from Sony and held off some strong competition from LG to remain the pinnacle camera phone of 2014. The 20.7-megapixel rear-facing camera partnered with Sony's acclaimed Exmor RS sensor results in superb picture clarity and the image stabilisation software included helps deal with troublesome low-light conditions. All these images can then be edited in a suite of available apps that comes pre-loaded on the Z3.

Another plus point is the wealth of shooting modes and customisable tools on offer, which cater for both seasoned photographers – to tinker with every aspect of the camera – and complete novices with the Superior Auto mode. If you add into the mix that 4K recording is an available feature on the Xperia Z3, it's no wonder why Sony is still the undisputed king of smartphone photography.

## Wide-angle lens

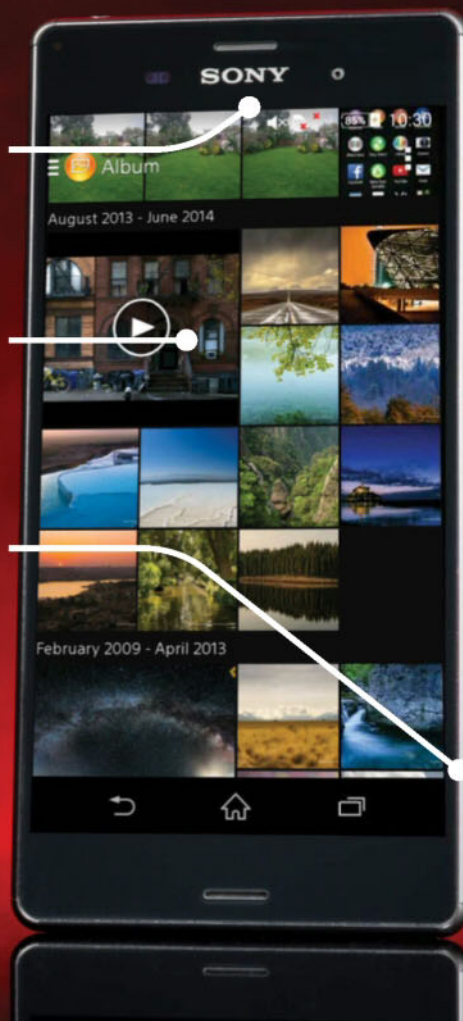
Sony's G Lens is capable of capturing more light and allows users to fit more into a single frame

## 4K recording

Don't forget that the Xperia Z3 is one of the first Android devices capable of shooting 4K video

## Shutter button

There's a dedicated camera button on the side of the Z3, which is perfect for capturing images on the go



## Runners-up

### ★ LG G3

Although it lacks some of the more sophisticated software found in the Xperia Z3, the LG G3 has a fantastic stabilisation feature to help keep blurry photos to the absolute minimum.

### ★ Samsung Galaxy S5

Samsung ploughed a ton of new features and shooting modes into the S5 to help even the most seasoned of snappers. It takes noticeably crisper images than that of the already solid S4.

# ★ Best Budget Phone

## Moto G 4G

The addition of 4G keeps the Moto G ahead of the rest

While some may be surprised that the latest variant of the Moto G didn't scoop the award, we think the addition of LTE in the Moto G 4G keeps it ahead. Although budget devices are constantly improving, similarly priced devices often come with compromises to keep the price low, there were simply no cutbacks made here. If you combine a great design, superb performance, 4G capabilities and a completely unskinned version of Android, all for £150, then it's clear to see why the Moto G 4G is undoubtedly this year's best budget phone.



## Runners-up

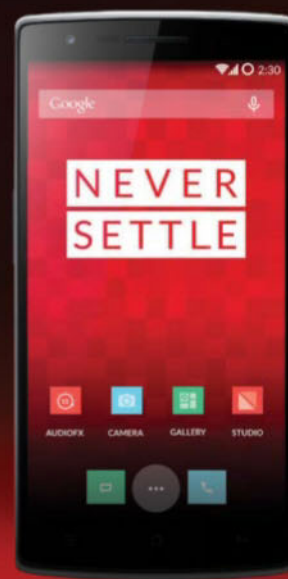
★ EE Kestrel ★ Moto E ★ Archos Helium 45

# ★ Best Mid-range Phone

## OnePlus One

Proof that a lesser name can make a superb smartphone

Unless you're heavily involved within the Android community, chances are the OnePlus One was a device that largely went under your radar. Although availability has only recently come out of an invite-only system, those lucky enough to get their hands on one had a device packed full of amazing features thanks to it running the Android Cyanogen OS. It's heavily customisable so that each device can be different, while the Chinese manufacturer didn't make cutbacks on the specs either. This is clearly a case of a high-end phone that can be purchased for a mid-range price.



## Runners-up

★ Xiaomi Mi4 ★ Sony Xperia Z3 Compact

## ★ Best Headphones

### Sennheiser Urbanite XL

The perfect accompaniment for all music lovers

The Urbanite XLs are the complete package when it comes to headphones. Not only do they look good, are ridiculously comfortable to wear and miraculously don't break the bank, but they also provide amazing sound clarity. The padded cups are ideal for blocking outside noise and help emphasise the crispness in each note. While many of the other headphones we've tested this year don't deliver when it comes to bass, the Urbanites are one of the few pairs that will blow you away with the levels that can be achieved.



#### Runners-up

★ Bose QuietComfort 15 ★ Sony XBA-H3  
★ Sennheiser MOMENTUM Samba

## ★ Best Speaker

### Bayan Audio Soundbook GO

Brilliant bass and sleek design in a superb package

The most competitive area of Android accessories is that of Bluetooth speakers. What helped push the Soundbook GO above the competition is that it's one of only a handful of speakers that offer seamless NFC integration, as well as the standard Bluetooth connectivity option. Although the size of the speaker would indeed put some people off, the metallic frame manages to squeeze in two 1-inch drivers, as well as a separate driver for the bass. As a package it's completely unrivalled and you can pick one up for under £80. An absolute bargain.



#### Runners-up

★ Braven BRV-X ★ Spaced360

## ★ Best Manufacturer

### HTC

HTC may still be in turbulent times, but 2014 has been a good year for the firm

HTC used to be famed for releasing a constant stream of Android devices, but recent poor financial performances have required the Taiwanese firm to turn its attention to manufacturing a smaller, more concise line of devices with a big emphasis on design. HTC's runaway success story this year has been the fully metal, and absolutely gorgeous, follow-up to the HTC One, the One (M8). Recently, the firm was also behind the creation of the fantastic Nexus 9 tablet. If you add a select few additions to the budget-orientated Desire series, then HTC is a company that's moving in the right direction in terms of style and innovation.



#### Runners-up

★ ZTE ★ Motorola ★ Samsung

## ★ Best Retailer

### Clove Technology

Another great year for our friends over at Clove



Smartphone retailers tend to come and go, but Clove Technology has remained the premier choice for anyone looking for their next Android device. Usually offering prices cheaper than anyone else, the firm's ordering system is simple to use and your only problem will be just how much choice there is! If you're unsure

what to buy, check out the website's 'compare' feature where you can see the small differences between up to three devices at a time. With a helpful team ready to help you, there's no reason why Clove Technology shouldn't be the place where you purchase your next smartphone or tablet.

#### Runners-up

★ EE ★ Three ★ Motorola

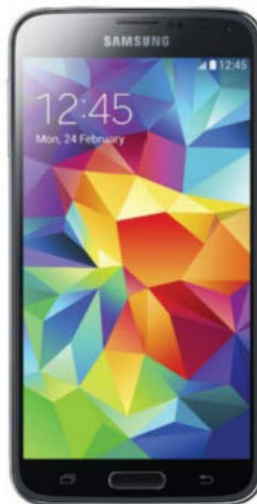
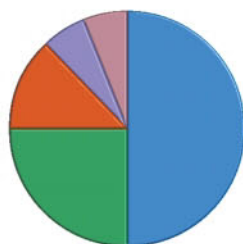


# Readers' Choice Awards

## ★ Phone Samsung Galaxy S5

When we first reviewed the Samsung Galaxy S5 back in May, we instantly fell in love with it and it seems you guys did too. Winning half of all the votes cast, the S5 has proved to be a massive hit around the world. The device, for the most part, is more an incremental upgrade to the S4 and while it lacks the revolutionary aspects that we found in its predecessors, it is simply faster and more efficient. The TouchWiz user interface has undergone an array of changes to make it vastly easier to use and the sheer number of options, from eye tracking to remote locking, means it has all the bells and whistles needed to keep even the most avid Android user happy.

Galaxy S5.....	50%
HTC One (M8).....	25%
LG G3.....	13%
One Plus One.....	6%
Galaxy Alpha.....	6%

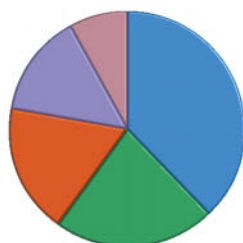


“The sheer number of options, from eye tracking to remote locking, means it has all the bells and whistles needed to keep even the most avid Android user happy”

## ★ Tablet Samsung Galaxy Tab S 10.5

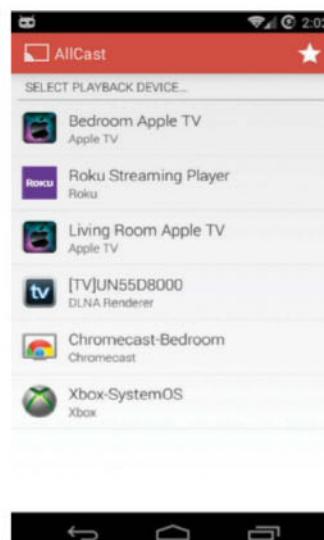
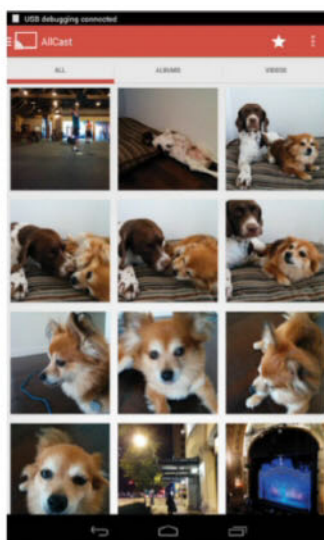
This year has been a solid if unremarkable year for Android tablets as a whole, but that hasn't stopped Samsung taking the top two places here with the Galaxy Note 10.1 and Tab S 10.5 leading the way. The latter happens to be the company's latest attempt at a flagship tablet and while its price tag would undoubtedly put off a lot of people from purchasing, it's also by far the best-looking tablet the firm has ever produced and falls directly in line with its new premium design ethos. When you partner this with fantastic build quality, an astonishingly quick processor and monster battery life, it's no wonder why you guys have voted the Tab S 10.5 as your tablet of the year.

Galaxy Tab 10.5.....	38%
Galaxy Note 10.1.....	22%
Xperia Z3 Tablet.....	18%
Asus Memo Pad 7.....	14%
LG Pad 8.3.....	8%



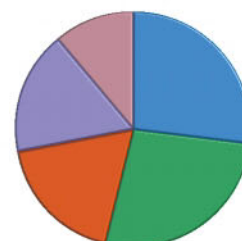
## ★ App AllCast

It was a hard task putting together a shortlist of apps for this category, especially considering that thousands of new apps are released every week. The final five ended up splitting opinion, but while Tinder pushed it close, it was AllCast that came out on top. For those unfamiliar with the app, AllCast is regarded as the premier app for those wanting to stream content to their TV. It works seamlessly with Google's Chromecast dongle and enables users to find locally stored content and get it playing in just a few seconds. It also provides support for streaming music, photos, documents and any cloud-based content accessible on your device.



The AllCast app makes it easier to stream content from your Android device to a TV via a Chromecast. It also works with many other set-top boxes and games consoles

AllCast.....	27%
Tinder.....	27%
Hitman GO.....	18%
Monument Valley.....	17%
IFTTT.....	11%



## Best Smartwatch

# Moto 360

A revolution in smartwatch design

When Google announced Android Wear, we were teased with a glimpse of the Moto 360 smartwatch.

Effortlessly stylish with its circular dial, stainless steel body and leather strap, we couldn't wait to get hold of one. Now it's finally here, it lives up to the hype and has restored faith in a platform that was rocked by the underwhelming performance of the LG G Watch and Samsung Gear Live.

The biggest rival to the Apple Watch, the Moto 360 looks like an item of

jewellery you'd actually want to wear rather than a piece of hardware strapped to your wrist. Its interface is equally elegant, seamlessly integrating with Google Now and offering a wide range of backgrounds.

Not that the Moto 360 is a case of style over substance: under the hood it has a Qi charger for turbo-fast charging, an extra microphone for greater voice recognition, and an auto-brightness sensor that makes it one of the best Android Wear watches to use outside. A superior smartwatch.

### Runners-up

#### ★LG Watch R

The only other Android Wear watch to offer a circular dial, plus longer battery and Snapdragon processor, its traditional design couldn't quite match the Moto 360's unique flair.

#### ★Samsung Gear Live

While Samsung attempted to get one step further ahead with the addition of a health monitor to its watch, a small battery and clunkier design held it back.

### Edge-to-edge screen

With no bezel except a black bar at the bottom of the screen, little to no space is wasted on the 1.56-inch display

### Qi charger

Using the same technology as the Motorola-made Nexus 6, the Moto 360 can charge much faster than LG and Samsung smartwatches

### Fantastic form factor

From the circular interface to the leather strap, the Moto 360 raises the bar for Android wearables



"Motorola is honoured to receive this award in such a competitive category. It demonstrates to us that the Moto 360 experience and design is well received and respected within the industry."

Marcus Frost, Senior Marketing Director, EMEA and APAC, Motorola

## Best Tablet

# Samsung Galaxy Tab S 10.5

We were stunned by this eye-popping tablet

Impossibly thin and incredibly bright, the Galaxy Tab S 10.5 is a truly stunning tablet. At just 6.6mm wide and weighing 465g, Samsung's device was pioneering the slender slab design months before Apple announced its iPad Air 2. It also manages to squeeze a superior CPU into this snug chassis, boasting an Exynos 5 Octa CPU, which combines 1.9 and 1.3GHz quad-core processors and 3GB RAM. If this doesn't win you over, the Tab S's eye-popping display will. This 2560x1600 Super AMOLED screen is crisper and sharper than any

other Android tablet at 288ppi, with a level of photorealism that often feels like looking out of a window.

While TouchWiz has its detractors, we were won over by some of the tablet's uniquely Samsung features. This includes the ability to view two apps on the screen at the same time as well as view and control your Galaxy S5 smartphone remotely, including answering calls and responding to texts.

In a year when Samsung has had so many problems, it has managed to produce a premium tablet that is leading the pack.

### Runners-up

#### ★Sony Xperia Z2 Tablet

The Tab S's only real challenger, Sony's tablet is fractionally thinner and lighter than Samsung's but can't match its screen – though the Z2 Tablet is also waterproof.

#### ★LG G Pad 8.3

Representing the more diminutive tablets, the G Pad 8.3 offers a robust design and great value for money, but can't compete with the big boys.

### Stunning screen

Experience true-to-life colours and a 100,000:1 contrast ratio on the vivid Super AMOLED display

### Super slim

At just 6.6mm wide and very light, you hardly notice your holding or carrying this razor-thin tablet



"It's a fantastic honour to win Best Tablet of the Year in the Android Magazine Awards. We're delighted by the success of the Tab S and its Super AMOLED display, a real premium tablet experience with all the advanced user benefits of the Android platform"

Ines Van Gennip, Marketing Director, IT & Mobile Division, Samsung UK & Ireland



# Best Phone LG G3

A super phone with a giant screen

The LG G3 was the first of the latest generation of devices to launch, hitting the market in May, long before the Sony Xperia Z3 or Samsung Galaxy Note 4. However, rather than being a minor upgrade on the G2 hastily rushed out, the LG G3 is an outstanding handset that still manages to compete with those other flagships which launched up to five months later.

The LG G3 was the first with a Quad HD display, offering a stunning 5.5 inches of screen with a massive pixel density of 538ppi, ensuring everything you view is bright and colourful. It also has a laser auto focus for its 13MP camera, improving image stability when shooting photos or 4K video.

However, though these tent-pole features are impressive, it was the G3's user experience that won us over. Despite boasting a gigantic display, a thin bezel ensures that while the G3 is wider and heavier than its predecessor it still feels comfortable in the hand. The interface is also easy to navigate, stripping out unnecessary visual elements and with a smarter keyboard for faster typing. Though the phone offers its own twist on KitKat, all pre-installed apps can also be deleted if unwanted, freeing up storage space. LG also learnt the lessons from the G2 and included a microSD slot (take note Google).

"LG is delighted to win Phone of Year for the G3. The handset offers cutting edge, user driven benefits such as the stunning Quad HD screen and advanced camera features, all packaged within a sleek design. We're proud to have this innovation recognised by the Android Magazine awards."

Max Bruges, LG spokesperson

## Reasonably priced

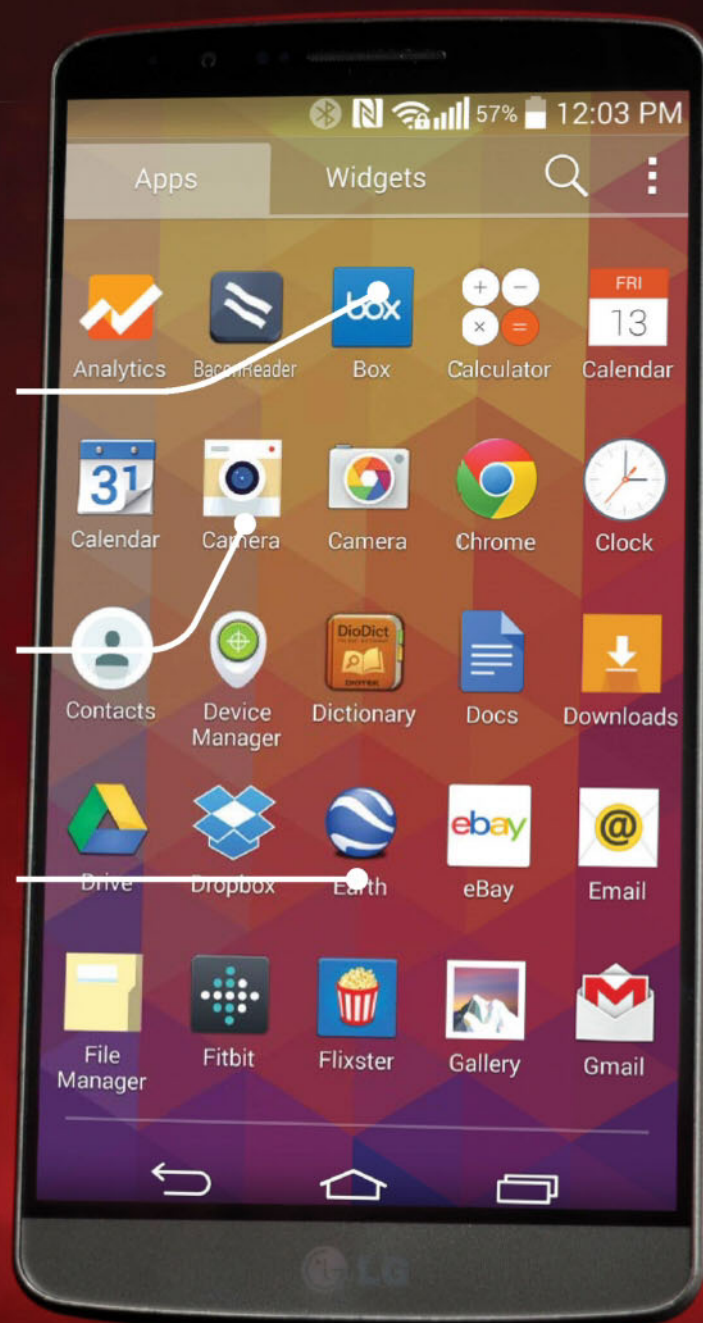
Significantly, the LG G3 is available for under £500, up to 10 per cent cheaper than its nearest competitor

## Laser autofocus

The laser measures the distance to the object instantly, giving you perfect-quality photos with 13MP. You can also take brighter, clearer pictures even in dark conditions

## Quad HD display

The 2560x1440 pixel screen offers vibrant colours and ultra-sharp images, placing picture quality four times 720p in the palm of your hand



## Runner-up

### ★ HTC One (M8)

An improvement on an already great phone

A successor to one of Android's most popular handsets, the HTC One (M8) doesn't disappoint. Its gunmetal aluminium chassis is gorgeous, its Sense 6 interface is a lesson in how a manufacturer's OS skin should be done, and its BoomSound speakers deliver almost unrivalled sound quality. However, launched in early 2014, the handset is showing its age and can't match either the LG G3 or Xperia Z3's display, camera or battery life specs.

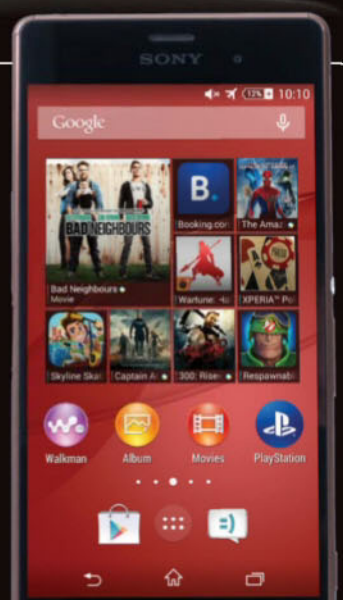


## Runner-up

### ★ Sony Xperia Z3

A waterproof handset with a lot of plus points

The Xperia Z3 is a brilliant phone that is completely waterproof and can even be used to take pictures underwater. Its spectacular screen is very bright and it is packed with Sony technology – including planned PlayStation 3 connectivity for remote gaming and improved audio. However, it arrived a little too soon after the Z2 and has not upgraded an awful lot, making us question the handset's hefty price tag.





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# Do more with your email

Upgrade your inbox with these top tips and essential apps

**W**e live in a world where users can always be connected to their emails, no matter what device they're using, or where they're located. There are new email clients appearing all the time, apps available for smartphones and with Gmail, you can now use certain features without needing online access. It's also easier than ever to sync your emails across numerous devices, no matter if you're an avid desktop, tablet or phone user.

The way we send emails is so fast and easy that the corresponding apps have had to improve and get better to keep pace, which is something that's been completed with relative success. In this masterclass, we take a look at some of the best email apps available for Android users and show you some of the features that will help improve how you use your email in the future.

**"We look at some of the best email apps and features that will help improve how you use your email"**

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My email account won't sync. Any idea on what the issue is?

The most common reason why an account won't sync is a change in password or security details.

Log on to the desktop version of your email account and check to see if any details have been changed.

You'll find great guides on how to use email attachments appropriately, how to categorise your emails and merging email accounts into one place, plus much more. So read on as we take you through some of the best ways to improve your email experience by solely using what's on offer from the Google Play Store.

### 1. Manual sync

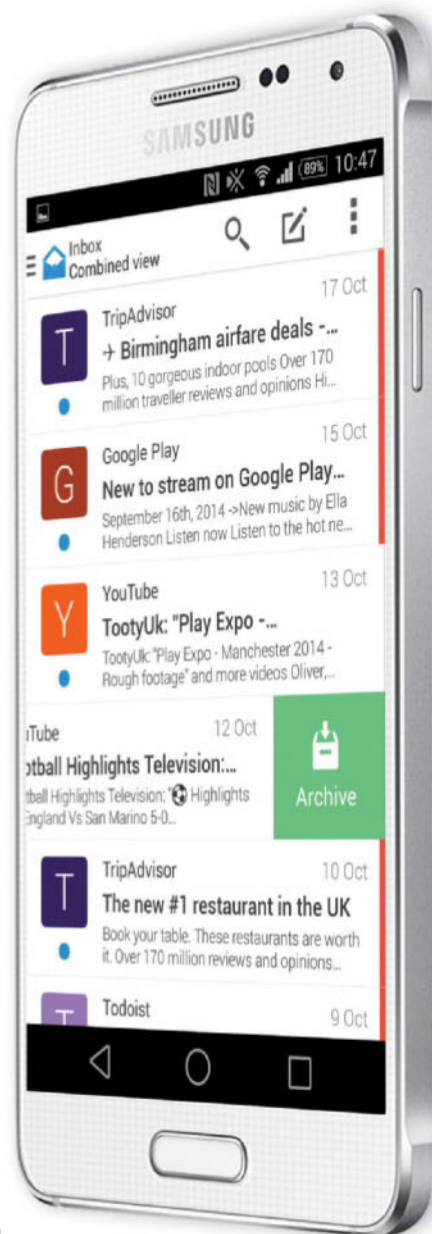
If you start to get annoyed with the amount of emails you're notified about, you can set up a manual sync option for your account, where you'll only see new emails when you go into the account directly.

### 2. Block spam

The likes of K-9 are fantastic choices when it comes to managing spam and phishing emails from your account. Using this app, it's possible to block specific emails and services that are sending you problematic emails.

### 3. Increase security

To provide some extra security for your email accounts, make sure to add



some sort of password system to them to help stop people accessing them. We recommend the CloudMagic app, which has a great passcode system for its users to explore.

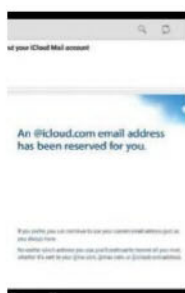
### 4. Better Outlook

If you're one of the many people who use an older email client, namely the Outlook 2003 system, then you may find some issues finding a decent Android app to access your emails account. It's a good idea to update your client, if possible.

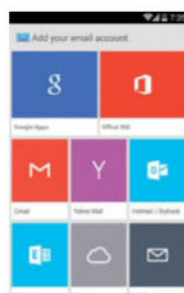
### 5. Custom server

Not happy with the available clients? No problem. It's entirely possible to create your own email server from scratch and apply the settings to match your exact criteria. Be warned, the process of creating one can be quite difficult.

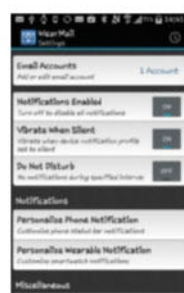
**Best alternative to Gmail** These third-party email apps are the best on Google Play



**Support for iCloud**  
**Sync for iCloud Mail**  
For those moving over from iOS to Android, use the Sync for iCloud Mail app to move your existing emails to a new Android email account. It's a quick process to complete and can save manually having to do it.



**Account integration**  
**CloudMagic**  
If you're looking for an app that provides a great system for managing your accounts in one place, then CloudMagic is a superb choice. It caters for Yahoo, Exchange and Office 365 accounts among others.



**Use with Android Wear**  
**WearMail**  
There aren't many choices for those wanting to get their emails on their Android Wear smartwatch, but the best so far is the WearMail app. It's easy to set up and great for getting a glance of your inbox on your wrist.



Works with » Varies with device

# Merge accounts into one inbox

Collate Gmail, Outlook and Yahoo! accounts with Boxer

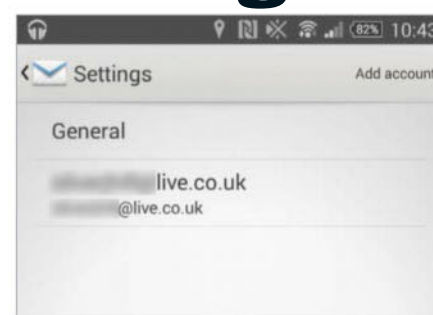
If you have one email address for your personal life and another for school or work, you'll know it be difficult juggling them both and often messages get lost between the two.

However, with the Boxer app, the process of bringing all your accounts into one place is made possible. The app provides a platform where users are able to manage individual accounts all from within the same app, or instead merge them together into a collective inbox. This inbox can then be customised to suit how you like to interact with your emails, be it through gestures or push notifications. There's no limit to how many accounts you can merge into one Boxer account, so make sure you follow this tutorial to get started.

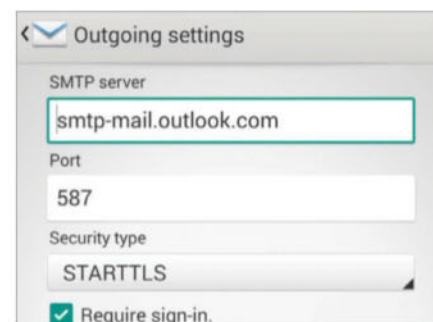


Advanced users can change the server details of their email accounts without too much fuss

## Customise account settings



1 Go to the individual account settings page in your email client and look for both the incoming and outgoing settings pages that'll be listed within this menu.

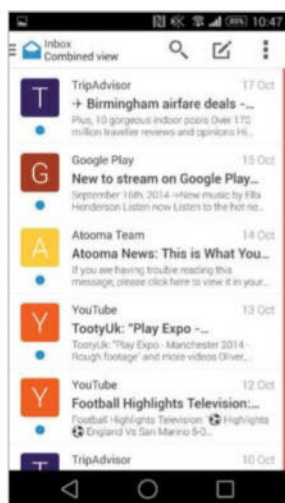


2 The options available to you are varied, but it's important to make sure you understand them before making changes, as bad edits can stop emails coming through.



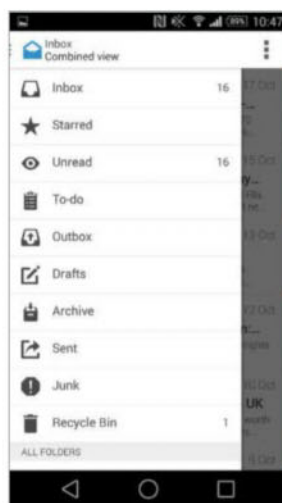
3 Go and edit the server name, as well as assigning an alternate port number if you have one. Choosing the correct type of security is also important for your account.

### 1 Add your accounts



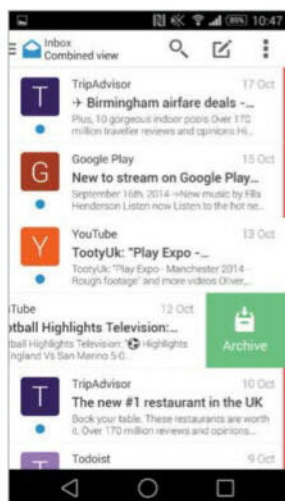
After launching the Boxer app, you'll be prompted to add an existing email account. Once the syncing process has finished, you can then add any number of subsequent accounts by upgrading to the Boxer Premium app. Press on the Confirm button once you've added all accounts.

### 2 Move between accounts



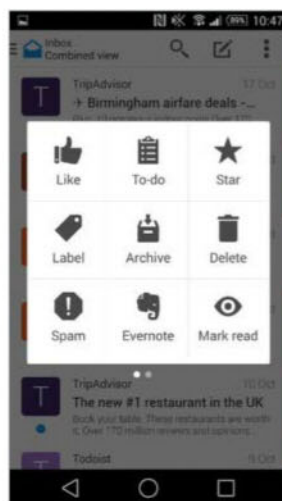
Open the side menu of the Boxer app and you should instantly see the various accounts listed. By default, your inbox will be a feed of all your different accounts, but by pressing on one of the listings, only the emails associated with that account will now be shown.

### 3 Use gesture controls



Boxer includes a couple of gestures that can be used to quickly move emails to different parts of your account. By swiping left you can archive the email and by swiping right you can move it to your recycle bin. Both of these folders are available through the app's side menu.

### 4 Archive and other options



By long-pressing on any email in Boxer, you'll open up a new menu with several actions. Users can choose to move the email to a different folder or email account, which is really handy for keeping specific emails together. It's also possible to send email to the cloud through this menu.

Works with » Android 4.0 and up

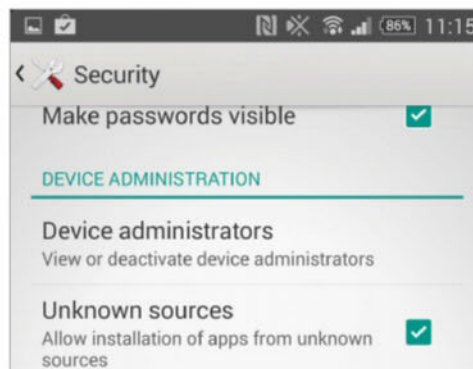
# Master email attachments

Print, save and use email attachments effectively

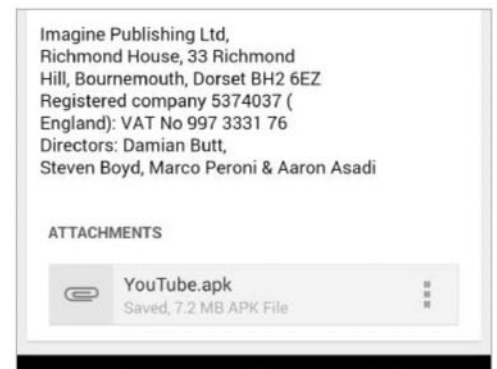
One of the benefits of all email clients readily available to Android users is that they offer an easy way to send small attachable files between email accounts. Although most people send documents as email attachments, it's entirely possible to send short media clips, or even more complex files. The size limits that apply to email attachments vary and purely depend on the email client you're using. Smaller ones tend to allow only for small files to be sent, while the likes of Gmail and Outlook cater for

“Although most people send documents as attachments, it's entirely possible to send short media clips, or even more complex files”

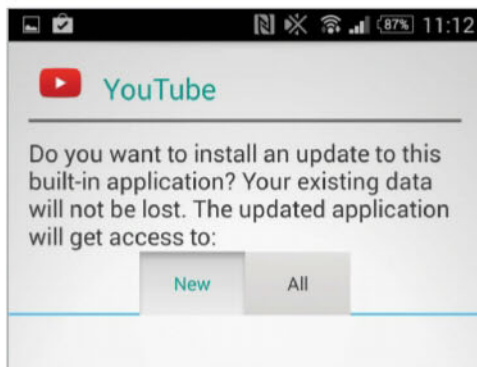
bigger files to be sent as attachments. The ways in which users can now interact with any email attachments sent to them has vastly changed in the past year. As well as being able to simply open them, many email clients now allow attachments to be saved directly to the cloud or, in the case of Gmail, enable compatible attachments to be directly printed from the email. In this tutorial, we'll show you the best things that you can do with any email attachments sent to you.



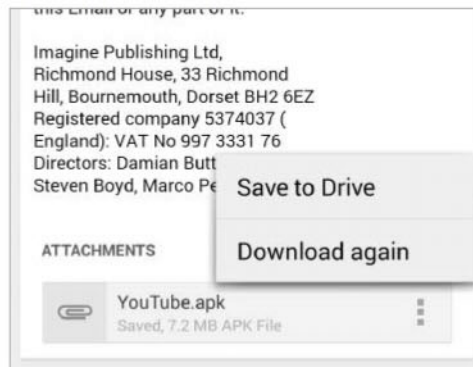
**1 Allow unknown sources**  
To cater for all email attachments, it's imperative that you first enable the Unknown Sources option from within the Security menu. This allows users to have access to install certain files and apps that are sent via email attachments, but make sure you only open files from reputable sources.



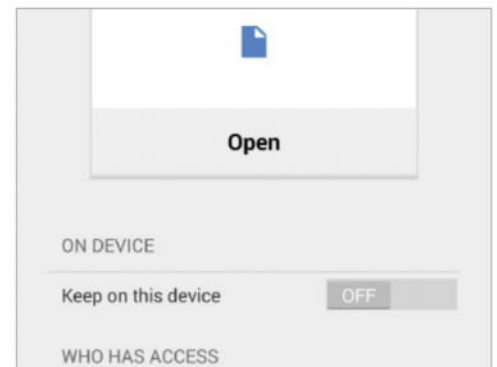
**2 Finding attachments**  
Open up an email of your choice and scroll to the bottom to find the attachment. As well as listing the size of the attachment, you'll also find what kind of file it is. In the example shown, we've emailed across an APK file that can be installed onto the device.



**3 Open and install**  
By simply pressing on the attachment, the file will look to open or install itself on to your device. Depending on the file, a new menu will appear with installation instructions to follow. At this point, you can also perform a virus scan of the file to make sure it's clean.



**4 Move to the cloud**  
Navigate back to the email and instead press on the menu icon (three dots) to the right side of the attachment. Here you'll find the option to save the file to Google Drive, or another cloud service depending on the email client you're using. Click on the option to continue.



**5 Managing in the cloud**  
Open up the corresponding cloud account and find the recently moved attachment. From the account, users can now download the file onto their device, read more about the origin of the attachment, or simply redistribute between various accounts.



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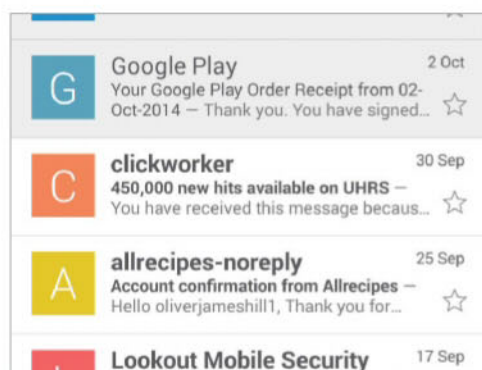
Works with » Android 2.1 and up

# Categorise emails with labels

Make a cluttered inbox more manageable with labels

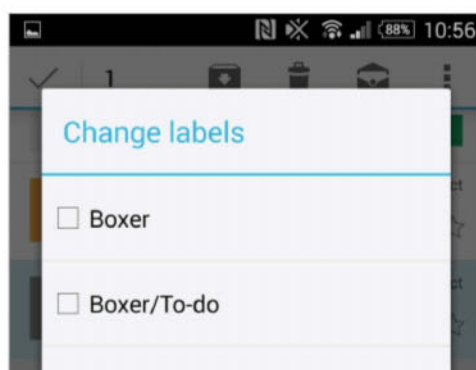
One of the things that many of Android's biggest email clients don't have is a category system, with which users can quickly move different emails into specified folders. It is, however, a feature that Google has looked to implement using a label system within Gmail. Through the app, users

are able to create a series of labels, which can hold an unlimited number of emails within that are all related to a similar topic. When a new email arrives, it can then be quickly moved out of the main inbox into one of the user-created label folders. It's a quick and easy solution for maintaining a clean inbox.



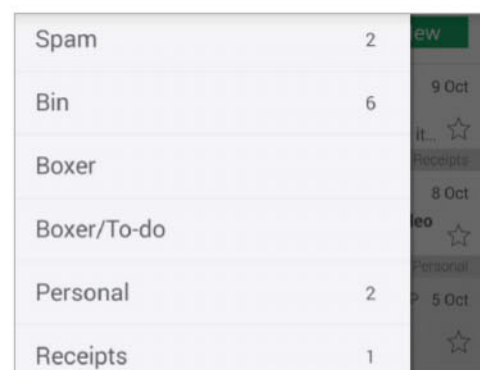
## 1 Select emails

Go through your Gmail inbox and long-press on the emails that you wish to group together into a newly created folder. With the emails selected, go to the menu icon and press on the Labels option provided near the bottom of the list.



## 2 Create and choose

You'll find a plethora of pre-existing labels to choose from, but there's also the option to create a new one. After selecting or creating a new label, the highlighted emails will now move to the designated folder. It can take a few minutes to move them all.



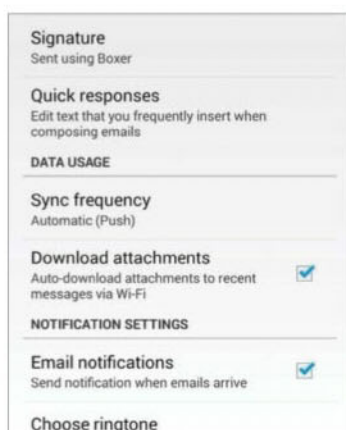
## 3 Open label folder

Go back to your inbox and each email should now have a little label symbol on the bottom right of it. To access a label folder, go to Gmail's side menu and scroll down the list to the label section and select the appropriate label.

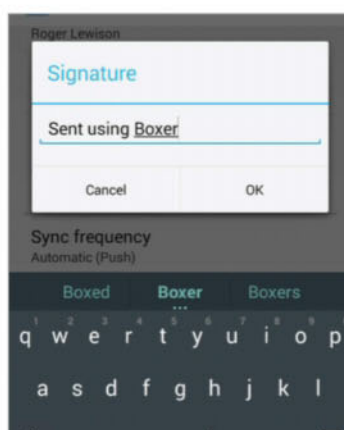


# Create and customise signatures

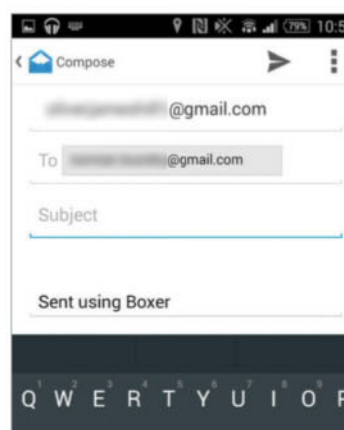
End your emails with a personalised email sign off



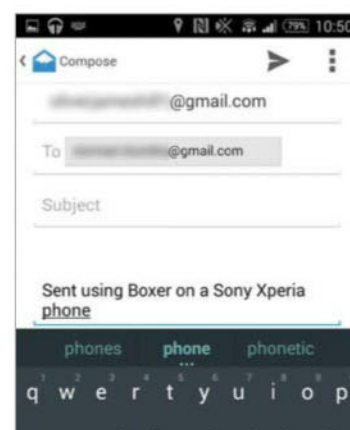
1 Go to the account settings in your chosen email app and find the signature option, usually found near the top of the settings screen. An email signature will be added to the bottom of any emails you send and can be a great way or personalising your messages.



2 The signature can consist of anything you like, but most people simply put their name and contact details in it. Although there are no criteria for how long a signature can be, making it too long can be a real eyesore for the person receiving your email.



3 Press OK when you've added your chosen signature and start writing a new email. At the bottom of the email you should now see your newly created signature. If it isn't shown, go back to the account settings menu and make sure you saved the signature.



4 If you want to personalise a signature to a specific contact, you can simply edit the current signature while typing out an email to them. Once the email has been sent, the email signature will revert back to the original one you set up at the beginning.

Works with » Android 4.0 and up

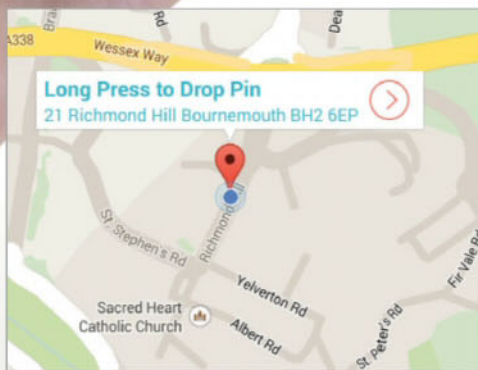
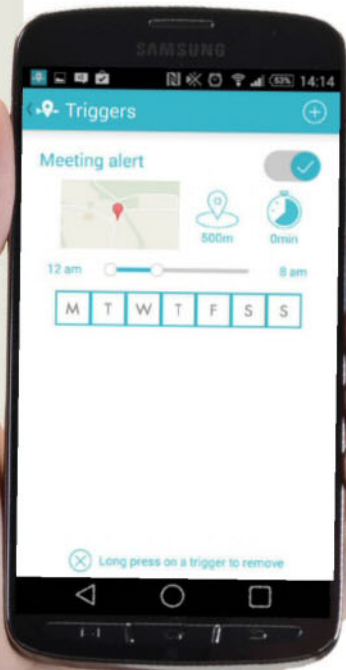
## Add location triggers to IFTTT

Create automated tasks based on your location with the useful LIFTTT add-on app

**IFTTT has become the vital app to use when automating tasks on your smartphone.** It's simple to use, customisable and there are thousands of pre-made triggers for you to save and use on your device if you don't want to create your own. To take it a step further, it's definitely worth your

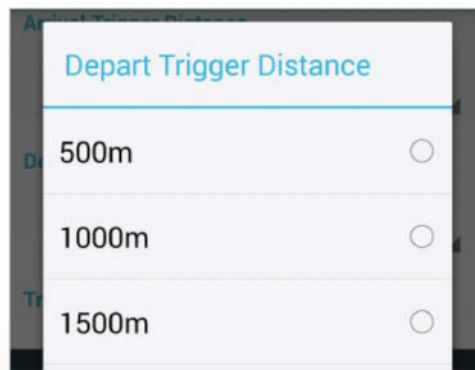
while downloading the LIFTTT app. This add-on app links with IFTTT, but enables users to create a range of location-based tasks independently. It's the perfect solution for those who want to send automated tweets, emails or simply designated files while on their way into the office, but it can also be used around the home.

In this tutorial we'll be taking a look at how you can go about creating your first location-based trigger in LIFTTT, as well as pointing out where you can find the useful pre-made recipes to download and use.



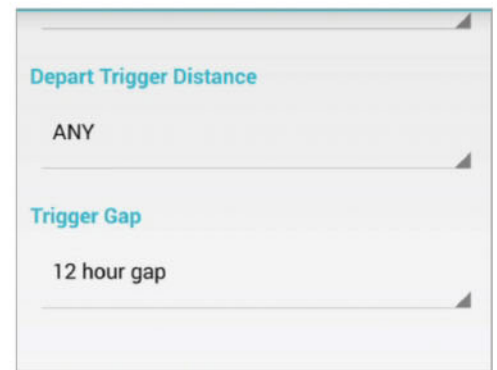
### 1 Track your location

Upon launching LIFTTT, you'll first need to connect it to IFTTT. Then press the '+' icon at the top right of the app to create a new trigger. Maps will open and zoom in on your current location. Press the red arrow to continue.



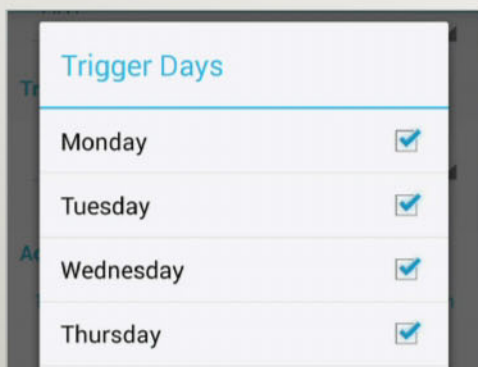
### 2 Enter details

Enter all the details of your new trigger. Give it a name, add your email and choose the task you want to complete. Make sure to check the Depart Trigger menu so that you can select a distance from where the trigger will be enabled.



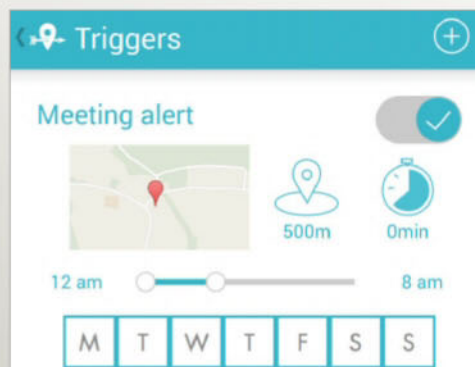
### 3 Alter options

Scroll down the options until you find the Trigger Gap tab. Use this to select how often you want the trigger to be enabled. If you work irregular hours, or walk to and from work on the same day, this will stop the trigger constantly going off.



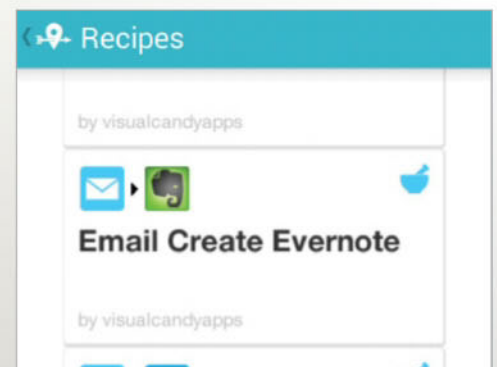
### 4 Select days

Another way to prioritise when the trigger is activated is the Trigger Days menu. Tick the ones you want, then head to the bottom of the menu and press the Confirm button to save and activate the new trigger on your device.



### 5 Get an overview

On the next screen you'll be able to see an overview. Review the days and times it'll work, as well as the distance required away from your current location for the trigger to work. Use the tick button near the top to both enable and disable it.



### 6 Download recipes

If creating your own triggers is too much of an issue, then how about downloading user-created ones? Go back to the LIFTTT main menu and select the menu icon at the top right, before opening the Recipes tab. Download any you want.



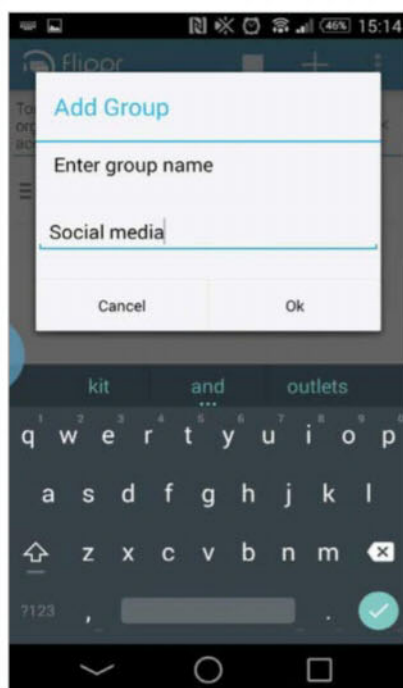
Works with ► Android 4.0.3 and up

# Access your widgets anywhere

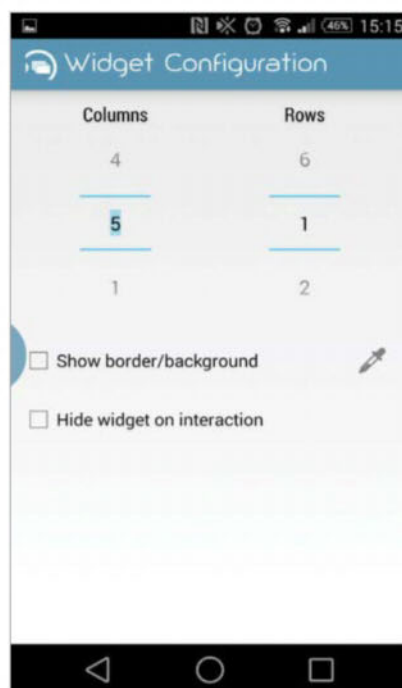
Use Flippr to add widgets to any screen

**W**idgets are helpful shortcuts to your favourite apps and there are even dedicated widget packs on the Google Play Store. Although widgets previously would only be accessible on your device's homescreen, thanks to the new Flippr app it's entirely possible to have access to them no matter what

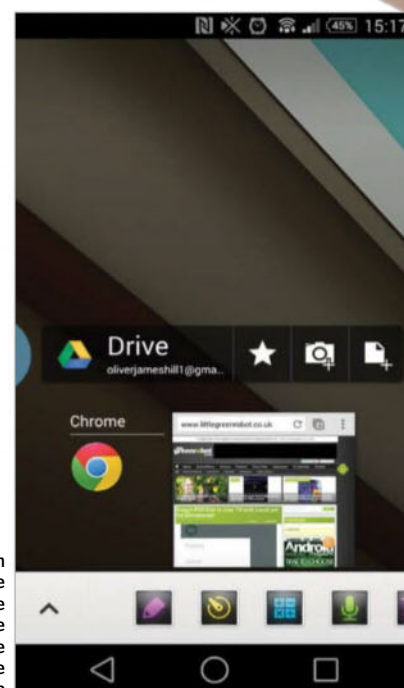
screen you're on. The app adds a small blue bubble to the device, where users can access their favourite widgets whenever they need them, without having to stop whatever they happen to be doing and having to head back to the homescreen. Follow the instructions provided in this tutorial to get started with it.



**[FIG 1]** Group related widgets together by type, to make them easier to find. Be aware that Flippr doesn't support all apps, so the widget you want may not be compatible.



**[FIG 2]** Configure the widgets to your exact specification. Applying a background will make it easier to see when on a text-heavy screen



**[FIG 3]** Touch and swipe the bubble to cycle through the widgets you've added in the Flippr app

## 1. Picking apps

With the Flippr app open, tap the '+' icon at the top right of the screen. You'll now need to enter a name for the types of widgets you want to add to your device (Fig 1). To stop it getting overcrowded, make sure that all the widgets you choose for a particular group are related to each other in one way or another.

## 2. Make initial choices

Once the group name has been set, you'll automatically be taken to the app selection screen. Scroll through the list provided and tap on the apps you want to add. You may find that some of the apps you've installed on your device aren't

compatible with Flippr and at the moment there's no fix for that.

## 3. Finalise and edit

After selecting all of the apps that you want to add, you'll now need to go through the finished list and decide on the order you want to them to be saved in. It makes absolutely no difference as to what order they go in, so it's just a matter of preference. Once done, press on the gear icon to customise a widget.

## 4. Customise widgets

We have to be honest and say that some of the default layouts of widgets aren't particularly good, but through the

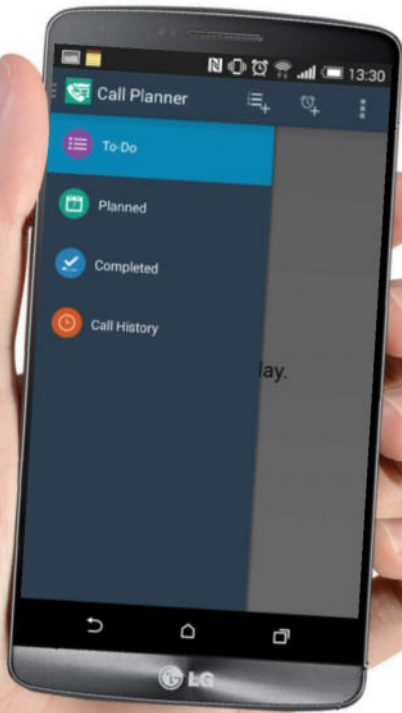
Customise menu you can change the way they look. Work your way through the provided dials to alter how big they are and also choose to incorporate a border or background if you wish (Fig 2). When you are happy with the improvements, tap the Back button to save the changes.

## 5. Take a look

Time to test the changes. Navigate away from the app and open up a random screen on your phone. No matter what screen you happen to be on, you should find a blue bubble on the left side of your device. Tap on this to open up your widgets and swipe on it to switch between the other saved widgets (Fig 3).

**faq**  
Ask your own question online at [littlegreenrobot.co.uk](http://littlegreenrobot.co.uk)  
I'm having trouble seeing the blue bubble. Can I change this?  
Via the Preferences section of Flippr, users can change the look, design and layout of the bubble to make it easier to interact with.

Works with  Android 4.0



# Schedule important calls

Make sure that you never forget to make a phone call again with the Call Scheduler automation tool

**W**e've all forgotten important calls we've had to make. Whether it's for work or play, sometimes things just slip your mind. Call Scheduler is a simple little app that means moments like that should become a thing of the past. With just a couple of taps you can set up a reminder that'll go off when it's time to dial. You can set reminders to call your contacts when it's their birthday, and

keep reminders going indefinitely if you've got calls you need to make on a regular basis. It's a surprisingly powerful tool and you can customise your notifications or create a to-do list to make sure that your calls are on time, every time. The app is free to download and that's all you'll need to for this tutorial. Once you've grabbed it, head on to step 1 and we'll show you how to set up a reminder.

## 1 Make a notification

When you start the app you'll see a blank screen and some buttons along the top. Tap the one that's an alarm clock with a plus sign. Here you can start creating your reminder. First, tap the blank face and add their details from your Contacts list.

## 2 Add the time

Next you need to set the time you want the reminder. It's a simple case of using the drop-down menus to select the date and time when you want your phone to give you a poke. You can add your reminder to a colour-coded category too, if you like.

## 3 Notify me once

Set whether you want the reminder to be a regular thing or a one-off. When you've done that, add a note at the bottom of the page that will show up when you receive the notification. When you're happy, tap the Done button at the top.

## 4 The finished article

This should be what your reminder looks like on the main page of the app. You can repeat the steps to add some more if you'd like. Tap on the top-right menu icon (three dots), then Settings, to tweak a few things before your reminder goes off.

## 5 Have a play

In the settings, you can add sound to your notifications, and add a reminder to call people when it's their birthday. A handy trick is to let the app automatically set up call-back reminders when you miss a call. Check the box and you're done.

## 6 When the time is right

This is what the notification will look like in your notifications panel. Tap the call button and you'll be able to make the call. Tap the to-do button and you'll be able to add it to the to-do list in the app as a reminder that it still needs doing.



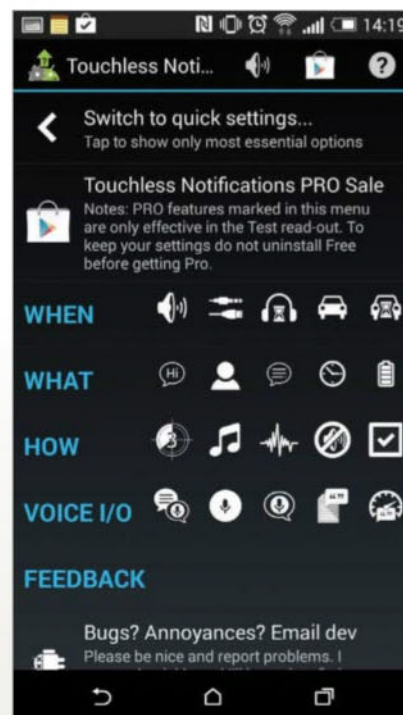
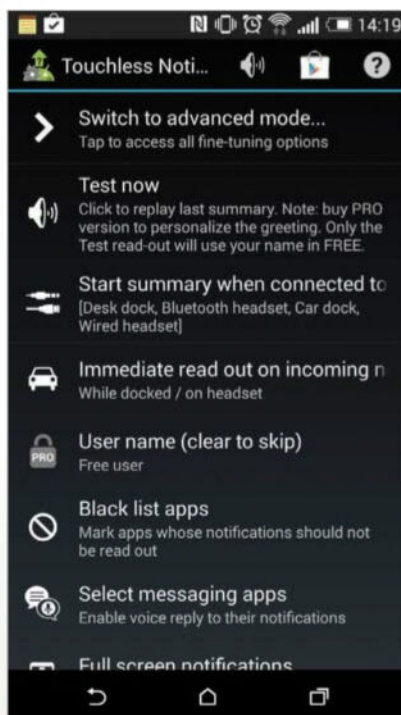
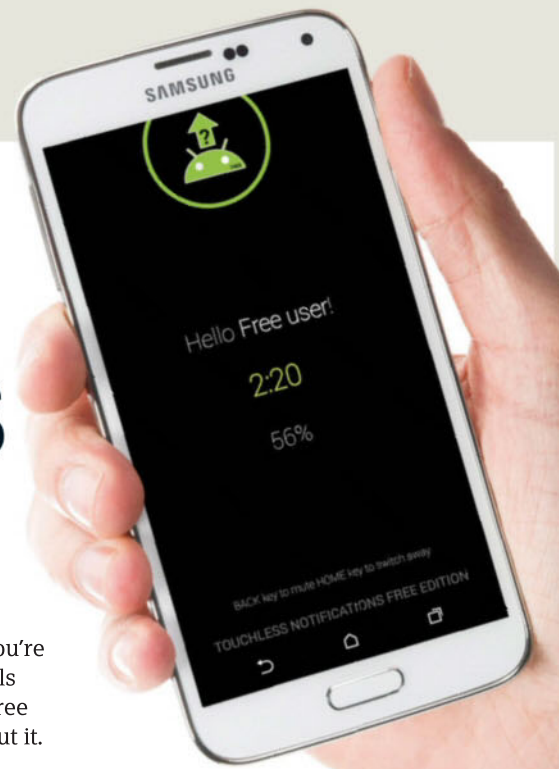
Works with ► Android 4.3

# Auto-switch to voice commands

Use the Touchless Notifications app to instantly turn on voice typing when you dock your phone

**T**ouchless Notifications is a clever app that reads out the notifications you receive. It's great for when you're driving, or even if you're listening to music on your phone while you're walking to work. But it can do more than just read out what you've got. If you follow this

tutorial you'll be able to set up the app to automatically turn on voice typing when you're driving, letting you reply to texts and emails while you're on the move. You'll need the free version of the app installed, and that's about it. Go to step 1 when you're ready.



**[FIG 1]** This is the advanced options screen. There's more to tweak, but it might take a bit of getting used to, especially with icons replacing a lot of the words

got a phone dock in your car, or you use a Bluetooth headset when you're driving, you can pick those. Alternatively, you could just leave it on all the time. When you're happy with your settings, head back to the main menu again.

## 5. Set up, set off

It's best to have a play around with the settings before you set off, and make sure that everything works the way you want it to. You don't want to be fiddling around when you're driving. Remember, you'll also need to change the permissions back if you decide you're going to uninstall the app. When you're sure everything's working, you're good to go.

## 1. Open the app

You'll need to set a couple of permissions to get the app up and running. You need to accept the permissions so that your device won't turn its screen off automatically. Once you've done that, this is the screen you'll see. Tap at the top, where it says 'Switch to advanced mode'.

## 2. Advanced options

This is what you'll see (Fig 1). You want to look for the option marked Voice I/O and then tap on it. At the top of the new list you'll see one marked 'Select messaging apps'. Tap on this and you'll be shown a list of the apps you can use voice typing with.

Make sure the ones that you use the most are checked.

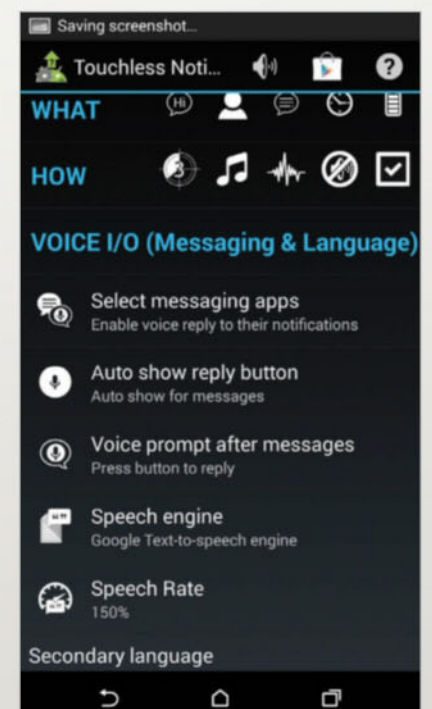
## 3. Ask to reply

Next tap on 'Voice prompt after messages' (Fig 2). This will set it so, once your notification has been read out, the app will automatically switch on Google Voice control so you can tell it to reply. Choose 'Always prompt after messages' for the most effective results. When you're done, go back to the main menu and select the When option from the list.

## 4. When to talk?

Here you can set when you want Touchless Notifications to turn on. If you've

**[FIG 2]** It's important you change these settings, otherwise you'll have to poke at the screen when you want to reply, and that's no good whatsoever



**faq**  
Ask your own question online at [littlegreenrobot.co.uk](http://littlegreenrobot.co.uk)  
Do I need to buy the Pro version?  
There's extra functionality and if you want to explore more of what Touchless Notifications does, it's worth it. But for this tutorial? No.

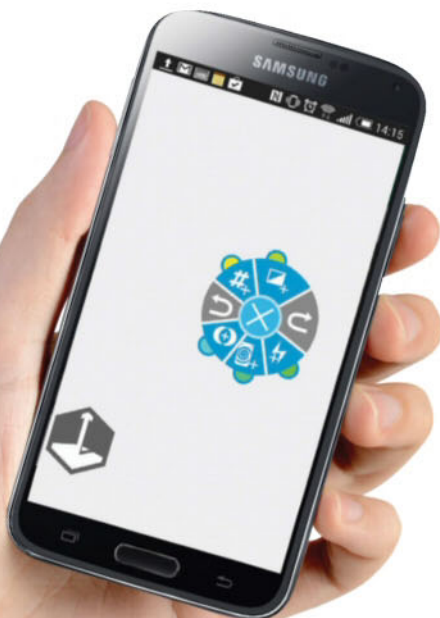
Works with » Android 4.0.3 and up

## Automate with mind maps using Dessin

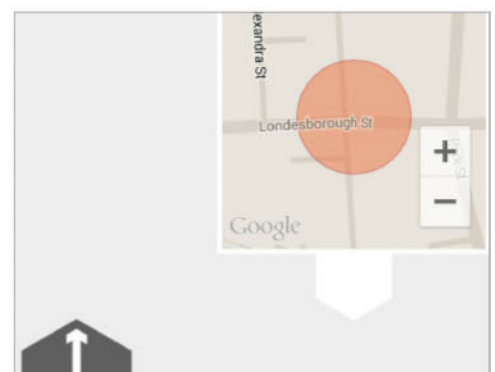
Use this clever, good-looking app to set up simple automated tasks for your phone

Sometimes, using an app to automate aspects of your Android experience can be a cumbersome experience. You'll find yourself poking around statements and conditions using a simple but not entirely effective UI. Fortunately, if you prefer to do things a little differently, there's another way. Dessin enables you to create automation out of mind maps, connecting together actions and triggers with a clever touch-based interface that soon becomes a delight to

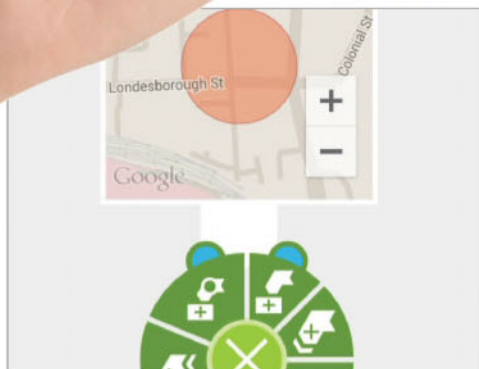
use. You can use the app to create actual mind maps, of course, connecting together notes and images to plan out your ideas, but in this tutorial we'll show you how to set up connections that will make your phone or tablet actually do things. The app is available in the Google Play Store for £2.99/\$4.99, and it might be worth familiarising yourself with its UI before we start. It's not particularly difficult, but it's likely to be pretty different from anything you've used before.



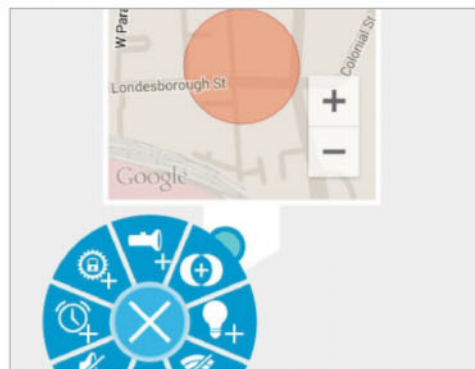
**1 Make a trigger**  
First up, we need to make a trigger. We're going to use a Geofence to begin with, but we'll show you some of the other triggers you can use later on. Push your finger on the screen, slide it through Triggers, and then slide it through Geofence to create one.



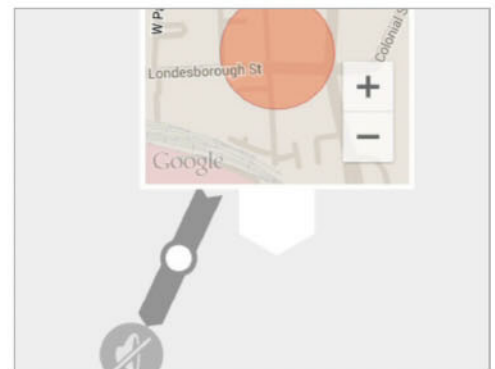
**2 Choose your spot**  
You can drag around in the Google Maps window to pick the precise spot where you want your trigger to occur. It's much easier to set the trigger when you're in the place you want it to happen, as it's a bit of a pain swiping to find anywhere further away.



**3 Make a connection**  
Next, long-press on the arrow shape underneath the Maps window. We want to slide through to the connect options, which should open a new green ring of choices around your thumb or finger. We're looking for the option marked 'Relay to new'. Now slide through that to select it.



**4 Relay the information**  
You can now choose what you want to happen when you're at that specific location. We're going to set it up so your phone goes silent when you're within the GPS region. Select that option and slide through it to make the connection. Well done, you've made your first automation.



**5 What it looks like**  
You should have something that looks like this: a connection running from your selected location to an icon. But you can do much more than that. Next we're going to connect another action to the same trigger. Push on the screen to bring up the dial to select your next action.

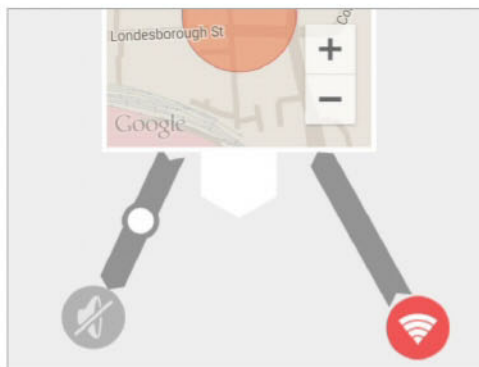


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[/littlegreenrobot](#)  
Like us on Facebook and  
join our community

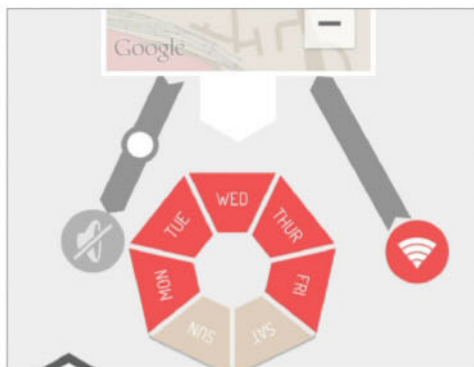
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**email**  
[qa@littlegreenrobot.co.uk](mailto:qa@littlegreenrobot.co.uk)  
Need help? Got a question? Drop us  
an email and let us know



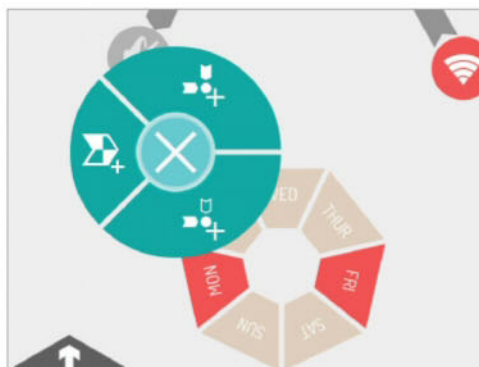
## 6 Add a new action

Create your action in the same way, but instead of relaying it to a new trigger, just select Relay. You can now drag your finger to the location trigger to make a new connection between it and the action. You should now have two actions connected to the same trigger.



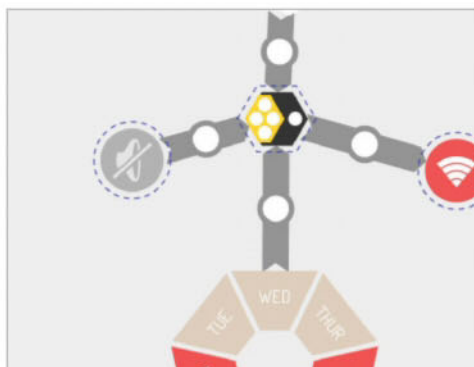
## 7 Use multiple triggers

To add multiple triggers, you need to use logic. Push on the screen again and choose another trigger. This time we're going to set a day of the week. Select that option and the trigger should now be on the screen. Now push on the screen again and choose the logic option.



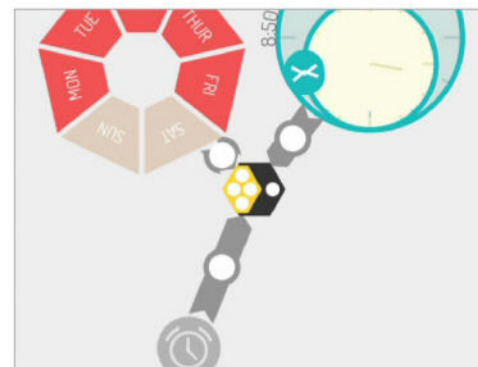
## 8 Select it all

Find the option called All. This lets you connect multiple triggers together, and means the actions will only occur when they are all fulfilled. Drop it on the screen. You might need to reposition a few things or zoom out to get a better view of what's actually going on.



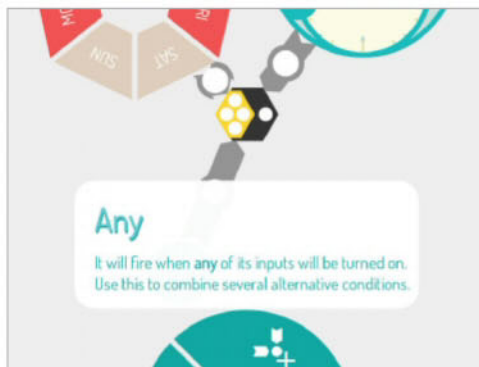
## 9 Connect the dots

Now you need to put relays between the All node and the triggers and actions we've already set up. When you're done you should have something that looks like this. You should be confident enough now to try some slightly more difficult things. Move to another position on the screen.



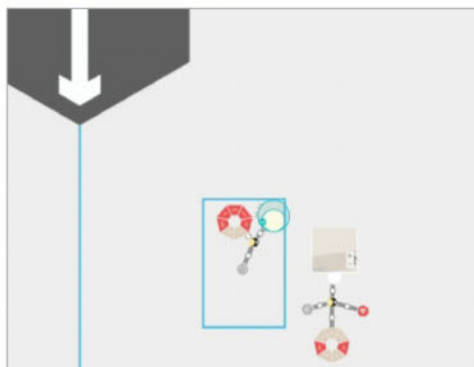
## 10 Set an alarm

You can set an alarm in a similar way. First, select the days you want it to go off, then select the time you want it to sound. Select the alarm action and relay everything together with an All node. You should end up with something that looks like this.



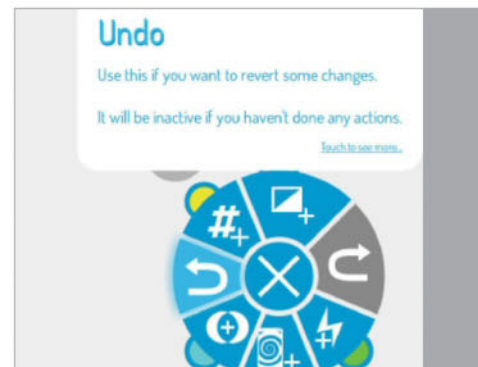
## 11 The logical choice

The other logical choices are Negation and Any. Any lets you set a series of triggers, any of which will trigger the action. Negation lets you flip the settings. So rather than activating at a certain time or place, you can use this node to turn an action off instead.



## 12 All in one place

Your automations are built into the same page. Sliding the black icon on the bottom left of the screen lets you zoom in and out. Push on the icon, then press anywhere else on the screen and you can scroll around the page. It's best to keep things tidy, all the same.



## 13 Learn to undo

Last but not least, it's important to know where the undo button is. If you've created an intricate connection and accidentally delete a chunk of it, you're going to be very annoyed. Push on the screen and you'll find an undo and a redo option in the first radial menu.

**faq**  
Ask your own  
question online at  
[littlegreenrobot.co.uk](http://littlegreenrobot.co.uk)

## So how do I just make mind maps?

If you want to make mind maps as well, head to the basic nodes option. Here you'll be able to add images from your gallery and text boxes. You can rename simple connections by pressing on them and then selecting edit as well. There is a finite amount of space, though.

Works with  Varies with device

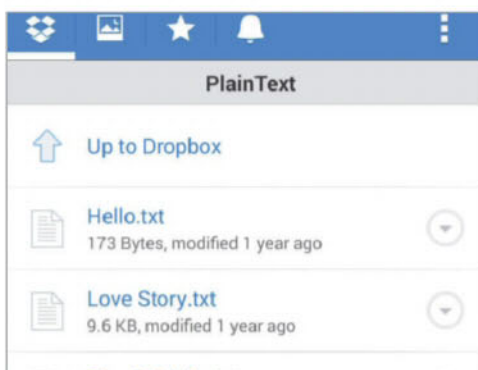
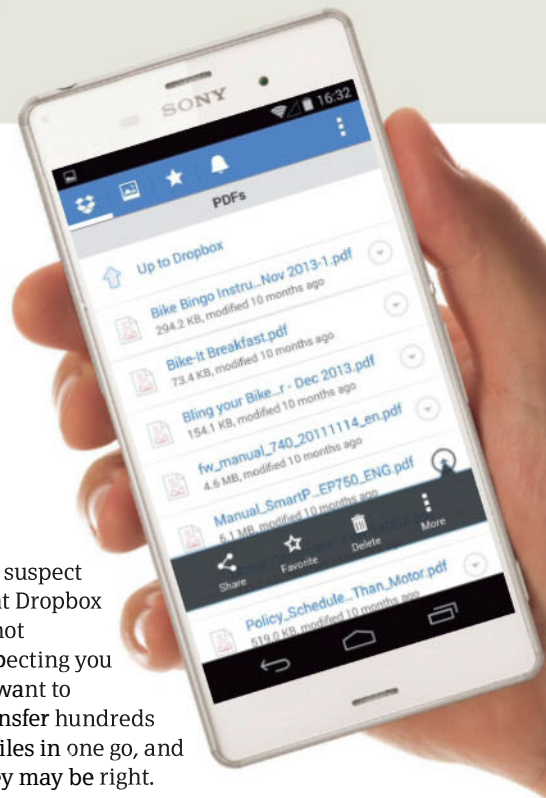
# Export to an SD card in Dropbox

Send any file from Dropbox to your Android's external storage

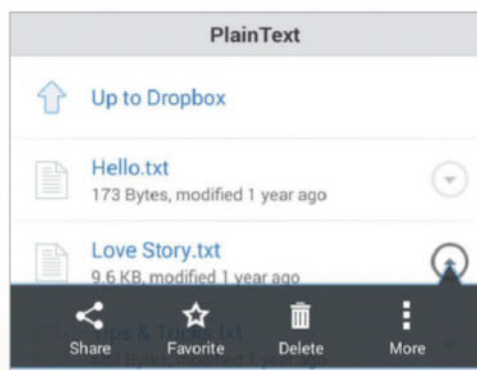
**C**loud storage service **Dopbox** has recently added the ability to export files from the Android app to an SD card if you have one installed on your device. The process conforms well to the way the official app already works, and we will demonstrate how to use it in a series of easy steps. If you want to keep some files stored

locally when travelling and you expect to have a patchy signal, this simple addition is an easy way to ensure that you have access to what you need no matter where you are – it could potentially save you from a disaster of a meeting or another situation where data is crucial. Bizarrely, you can only export one file at a time, which is an obvious limitation, but

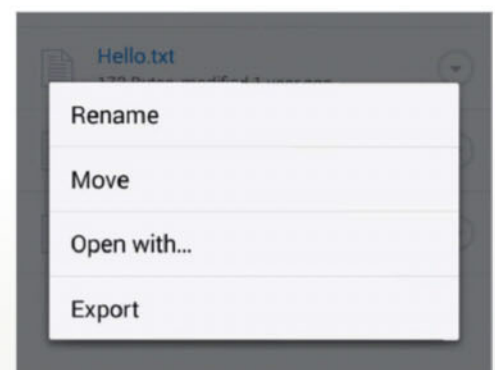
we suspect that Dropbox is not expecting you to want to transfer hundreds of files in one go, and they may be right.



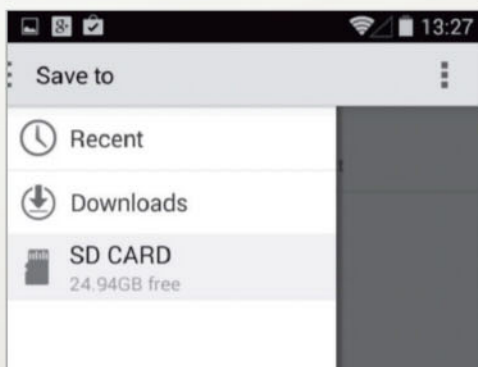
**1 Select items to export**  
You will need to navigate to the folder containing the file(s) that you want to export. If you tap the menu button when in a folder, you will be presented with different options which are of no use in this situation. So, make your choice and navigate to it.



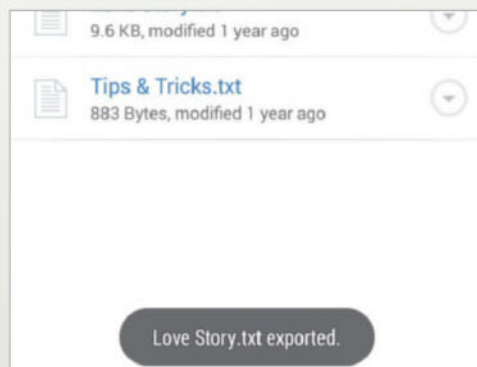
**2 Open the menu**  
Tap the small downward-arrow icon to the right of any file to see a new menu appear containing four options. The first three of these are quite handy and will be used often, but in this case you need to select More to bring up another set of options.



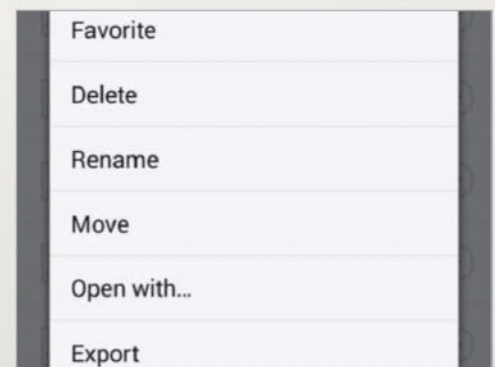
**3 Manage the new options**  
A new panel will pop up with Rename, Move, 'Open with...' and Export listed in order. The 'Open with...' option is very useful for immediately accessing files using other installed apps, but here you will need to select Export to proceed. The navigation should feel completely familiar throughout.



**4 Time to export**  
You will now see a new list appear under the 'Save to' heading. Provided you have an SD card installed in your device, the final option should be 'SD CARD'. If your card is not visible, go to 'Save to' > Settings > Display Advanced Devices to access it.



**5 Your export is complete**  
Once the file has been exported, you will be presented with a time-limited dialog to confirm that the file has moved over successfully. Remember that large files could take some time to move over, so be patient and wait until you see the message before performing any other operations.



**6 Use a shortcut**  
Another option to select a file for exporting is to hold your finger down on it until the new panel appears. A longer list will come to dominate the screen, with Export found at the bottom. Simply select it and follow the same process to move your file to the card.



# Control Wi-Fi and 3G connectivity with AutoDataOnOff

Automatically regulate how your Android device uses a data connection throughout the day

**M**obile data connections and Wi-Fi are the worst offenders for eating battery life, alongside the device screen, but they tend to be on all of the time when they are not needed. AutoDataOnOff gets around this problem by letting you cycle your connection so that you can still receive the voicemails and text messages you require, but don't have to be connected 24 hours a day. It can be used to give you peace and quiet at night and to also block out periods when you are busy, but it is the way it works in the background that makes it so impressive. We will now show you how to make the most of this very clever Android solution.

## Minimal settings

There are very few options within the app because no more are needed. The menu icon merely takes you to an 'about' screen with a small instruction paragraph and everything else is managed within the main settings panel. It is a logical setup

## Connection cycle

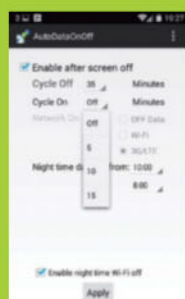
These two options let you set how long the data connection should cycle off and on for when the screen is turned off. In this example, the connection will cycle off for 35 minutes and then on for 5 minutes, and the cycle will repeat

## Network type

The ability to manage 3G/LTE and Wi-Fi is included in the app, but at night it will go further and include Wi-Fi management automatically. It is surprising how much of your Android device connectivity you can manage in one simple app

## Understand the extra features

Despite the app's ease of use, there are some extra features that are worth understanding in greater detail. Some knowledge is always helpful



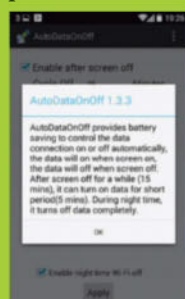
### Avoid all interruptions

The cycle option includes the ability to choose 'Off' in the Cycle On setting. This means that your data connection will remain closed until you return to the app and turn it on again. It is useful for meetings etc.



### Enabled and disabled

After you make any changes within the app, you should tap Apply to ensure the changes have taken effect. You will see a small confirmation on your homescreen to advise if the settings are enabled or disabled.



### Some basic instructions

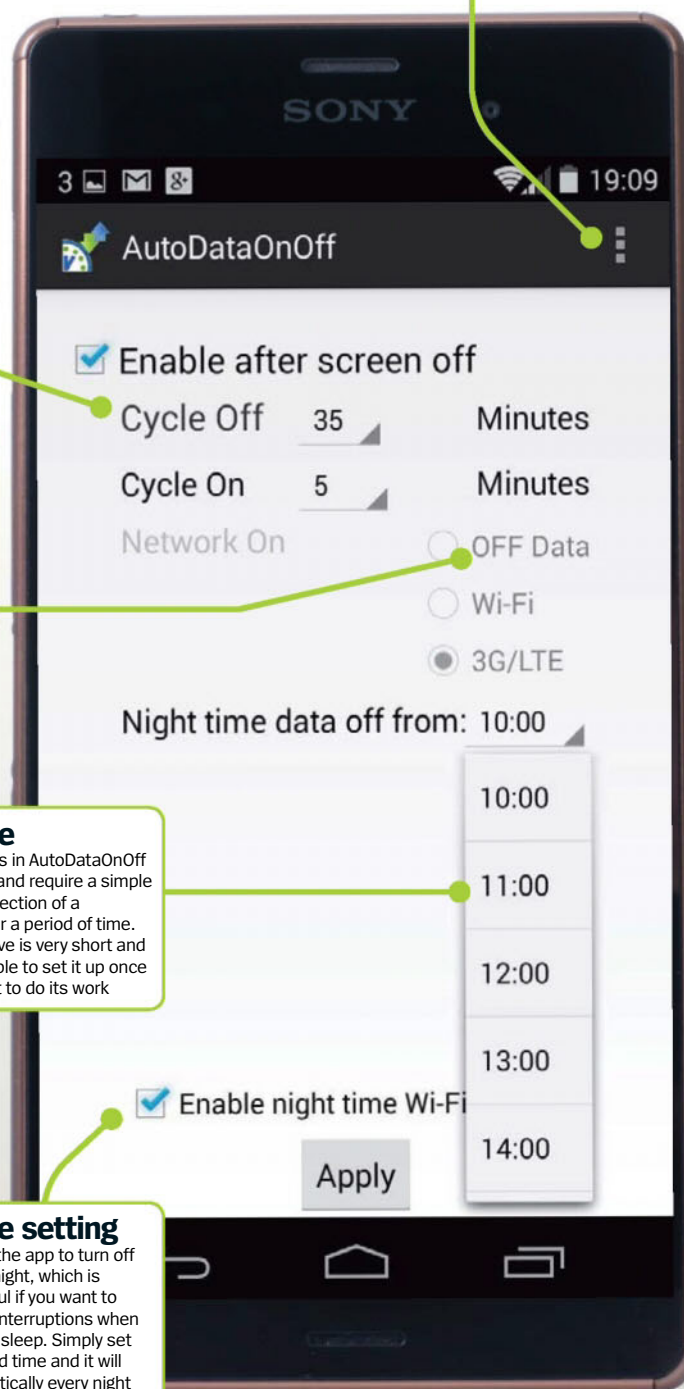
Tap the menu icon at the top to read a set of instructions for the app. You will notice how short they are because most parts of the setup are completely logical, but this panel also offers some useful information.

## Set a time

All of the controls in AutoDataOnOff are easy to use and require a simple tap and then selection of a particular time or a period of time. The learning curve is very short and you should be able to set it up once and then leave it to do its work

## Night-time setting

You can enable the app to turn off Wi-Fi as well at night, which is particularly useful if you want to avoid needless interruptions when you are trying to sleep. Simply set the start and end time and it will activate automatically every night



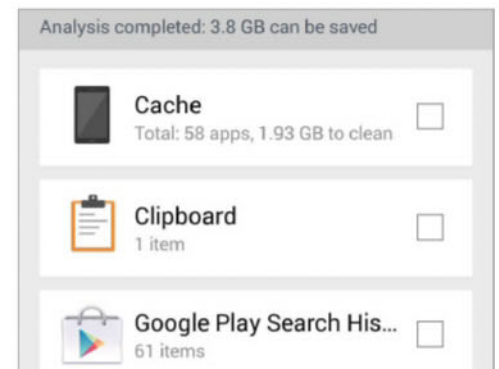
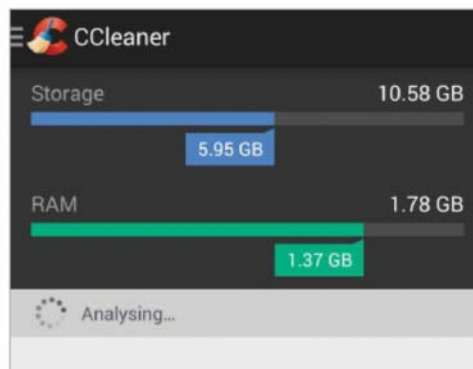
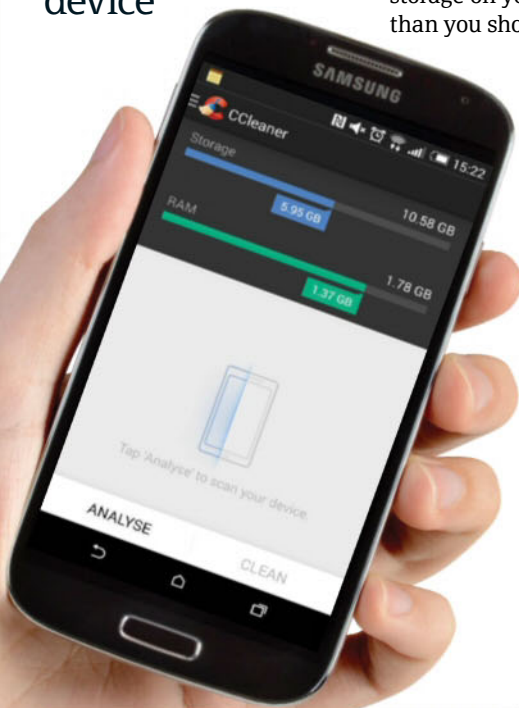
Works with » Varies with device

# Remove junk files from device using CCleaner

Use this powerful app to find out how much space you could save on your Android device

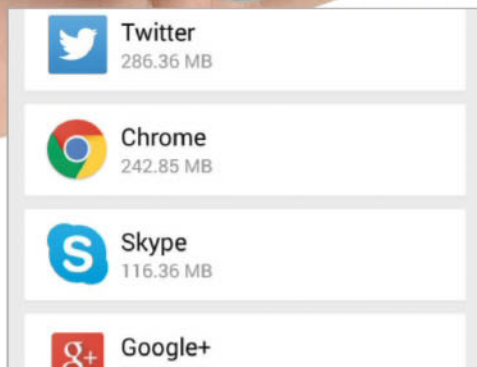
If you're anything like us, you're installing and uninstalling new apps on your Android phone or tablet on a pretty regular basis. But that process can leave you with a surprising amount of leftover data. And on top of that, a lot of the apps that you use often will have automatically cache a lot of information as well. That can eat up the precious storage on your device, leaving you with a lot less than you should have. That's where CCleaner comes

in. It's a super-smart app that scans your device's memory and finds the bits and bobs that you're not using, or you don't need. Then all it takes is a few taps to clean everything up. It does a lot more than that as well, including better app management, if you're willing to put the time in. All you'll need for this tutorial is the app, which you can grab from the Google Play Store for nothing. When you've downloaded it, you're good to go.

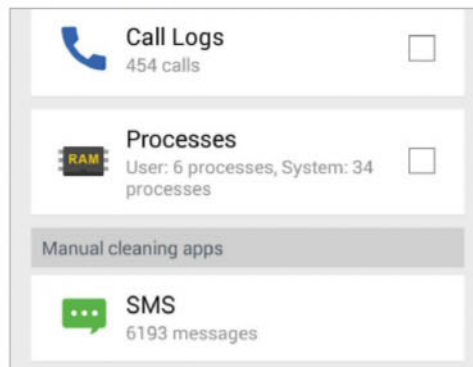


**1 Start your analysis**  
When you launch the app you'll see a blank screen with a few buttons. You want to tap the one that says Analyze. This will start the app scanning your device to see what you can get rid of. Depending how much memory you've got, it could take a while.

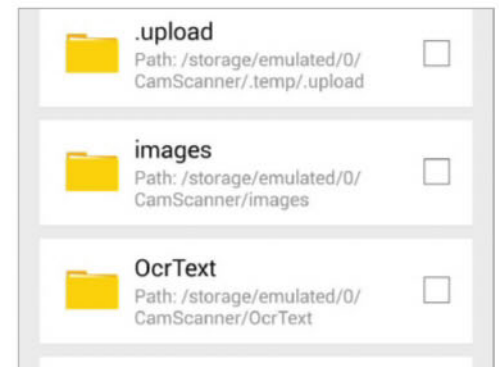
**2 When it's done**  
When the analysis is done, you will be shown a list of all the places where there's data you can delete. If you want to nix it all, check the boxes then tap Clean, but you might want to look a little deeper into what you're deleting. Tap one of the categories.



**3 What is it?**  
You should see another list that breaks down what CCleaner found in that category. If you tapped Cache, then you'll see which apps have the most cached data. Tap through again to get a better picture of what's what. There's a good chance you'll want to keep some of it.



**4 Clean your own mess**  
At the bottom of the list on the main page, you'll see apps marked 'Manual cleaning'. Tap one of these and you'll be taken to the app itself so that you can delete some info. The prime example is your SMS app, which is probably full of messages you don't need.



**5 Empty folders are bad**  
You'll often find that you've got a lot of empty folders left on your device. Things like camera apps often install their own folder and then leave them there when you delete the app's data. This is one of those times you can just delete the whole category with impunity.



### 1 See the systems

You can use System Info for real-time data about your RAM and battery usage.

### 2 Add a widget

The app includes a widget that lets you run a clean-up from one of your homescreens.

### 3 Don't get stuck

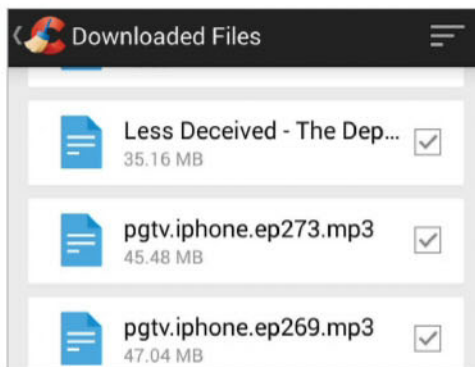
There's an extensive help section on the CCleaner site that's accessible directly from the app.

### 4 Keep it clean

Don't just run CCleaner once. Keep on top of things to make your device continue to run faster.

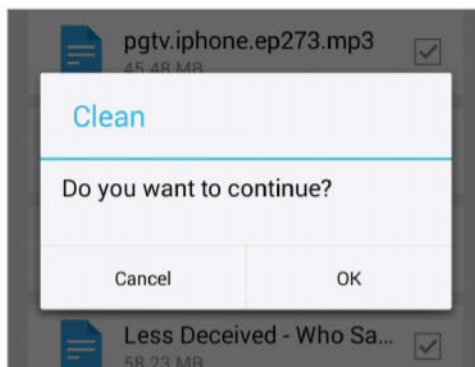
### 5 If in doubt, check

If you're not sure what you're deleting, a quick Google search will show if it's important.



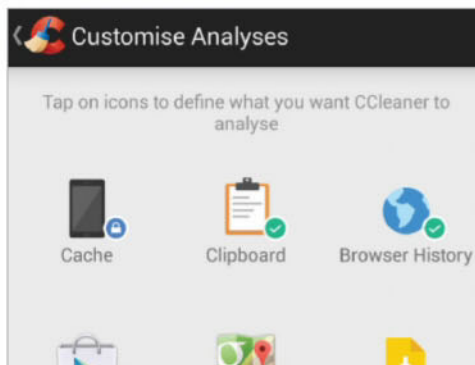
## 6 Bye bye downloads

You'll be surprised how much stuff ends up in your Downloads folder. Images you've grabbed and looked at once; files you've downloaded for work and don't need any more. Go through them and check the box next to the ones you don't need. When you're done, tap the Clean button.



## 7 Are you sure?

You'll always be prompted with a pop-up just before the delete is complete. If you're sure you want to go ahead, tap OK. Once the things you're deleting are gone, they're gone for good though, so make sure you're not getting rid of anything you want before you confirm.



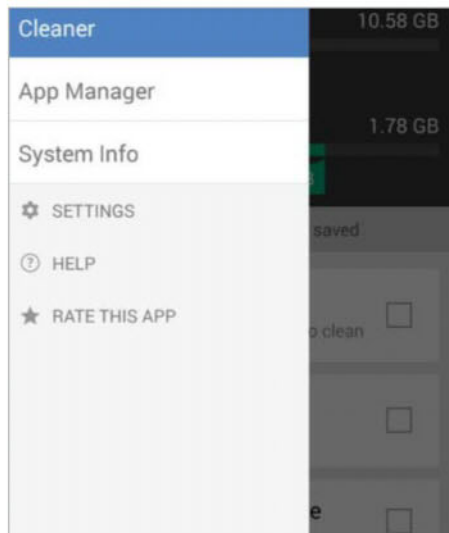
## 8 Customise the experience

Last but not least, head to the settings menu in the bar that slides out from the left of the screen when you tap the logo. Tap 'Customise analyses' and you can select which categories the app will scan. It's a good way to make sure you're not wasting time.



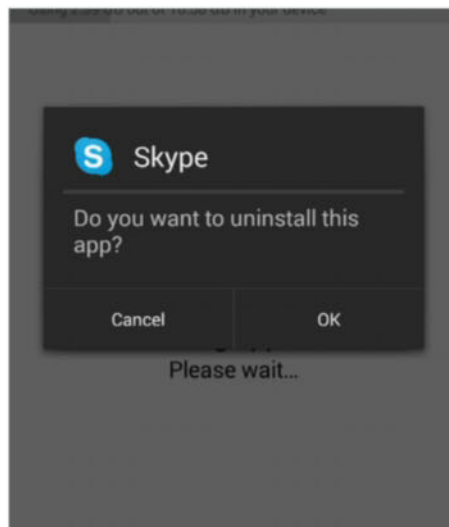
# Use App Manager to clear more space

Thanks to CCleaner's built-in App Manager, you can uninstall groups of apps with just a few taps. Here's how...



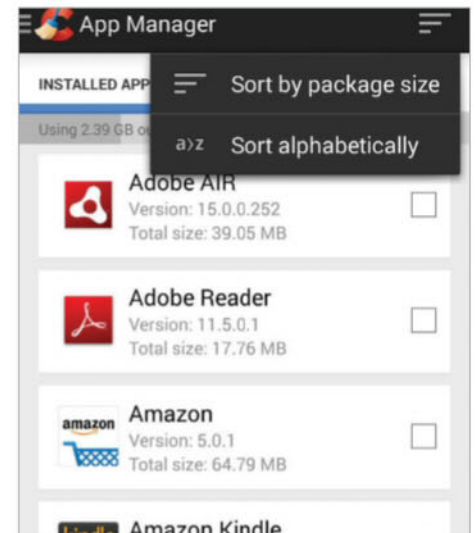
## 1 Get there first

To access the App Manager, tap on the logo at the top of the main screen to bring up the side menu. There you'll see the option for it. Tap that and you'll be taken to a screen where you can scan to see the apps you've got installed on your device.



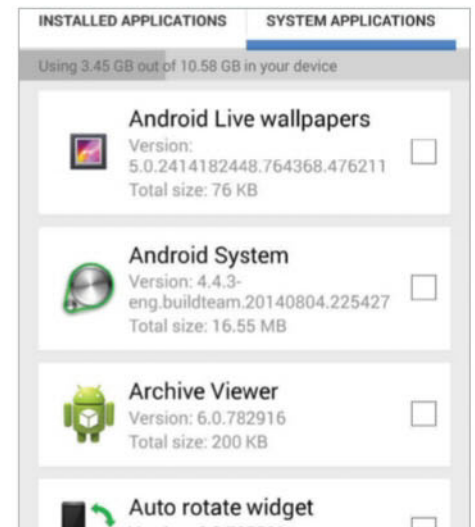
## 3 Accept the prompts

You'll now get a number of prompts about whether or not you want to uninstall each of the individual apps. Tap OK and the system will remove them all for you. When you're done, look at all the space you've managed to save by stripping out unimportant or unused apps.



## 2 Sort the list

Tap the three-lines button in the top right of the screen and you'll be able to arrange the apps by size or name. You can tick multiple checkboxes, so work through the list and select which of the apps you'd like to get rid of. When you're done, tap Uninstall.



## 4 The system apps

You can do something similar with your system apps, which are displayed on a separate page. You can't uninstall them unless you're running a rooted device, but you can strip out their data. Follow the same box-checking procedure, then tap Uninstall to take them back to their original factory sizes.

Works with >> Android 4.0.3 and up

# Create your own custom volume panel

Use the Noyze app to take even more control of the volume settings of your device

**T**he customisability of the Android OS is often cited as one of its major strong points. If you're willing to put in the time and effort, you can pretty much tinker with everything. Some of the changes you can make require root access, but there's plenty you can do without taking things that far. For example, the Noyze app lets you create and customise your own volume bar. It sounds like a pretty simple thing, but you'd be surprised how much more useful you can make your volume controls. There are a number of different templates to work from and you can polish and change them to better suit your volume controlling needs. It's pretty easy to use, but in this tutorial we'll show you the ropes and walk you through some of the problems you might encounter along the way. All you need to get started is the Noyze app, which you can download from the Google Play Store right now for nothing at all. Once it's installed, you're ready to go.

## Separate sliders

This particular panel gives you three volume sliders, so you can alter the volume of your alarms, your ringtone and your media. You can open the sliders by pressing the volume button on your device, just as long as you've given permission to Noyze in Settings

## Panel position

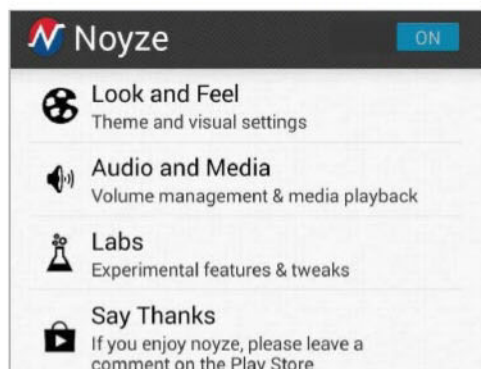
The volume bar doesn't have to sit at the top of the screen. It doesn't even have to be a bar. It's worth having a play with all of the settings to find the control system that best suits the look you're going for with your phone or tablet

## Minimise it

The arrow at the bottom of the bar allows you to minimise it so just the ringtone volume slider is on display. Other templates show you the song you've got playing at the moment, or take a more minimalist tack with just a single slider

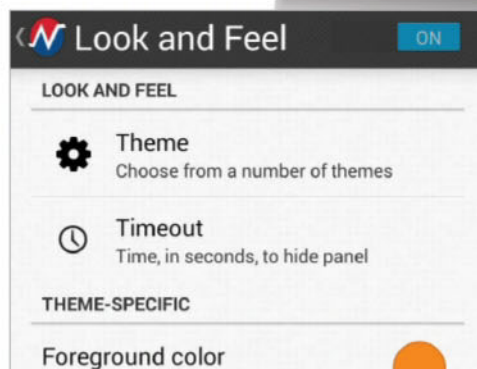
## Choice of styles

This is just one of the many different templates that you can choose from. You can change the background and foreground colours with ease, and there are plenty of variations if you need different functionality. Some templates ape other operating systems' volume controls, for example



## 1 Main menu

This is the main menu of the Noyze app. We'll come back here numerous times in the tutorial. It's pretty simple. Firstly, switch the Off button in the corner to On. This will take you to the Accessibility settings menu. Allow Noyze to take control of your volume settings.



## 2 Set your appearance

Next, head to the Look and Feel menu. This is where you can customise your Noyze experience. There's a lot to go through so we'll start with the theme. Tap on that option and you'll be taken to a list of the different styles of volume controls you can use.



## 3 Make your choice

Scroll through the options and choose the one that's best for you. You can change it again whenever you want. Depending on which theme you pick, some of the following options might be closed to you. Don't worry if they are: it's just because the style you've picked doesn't support them.



### 1 Go less visible

You can get rid of your volume bar entirely, simply by selecting the invisible theme.

### 2 Keep in touch

It's worth dropping the transparency rating if you're using a theme that's just a bar.

### 3 Try it out

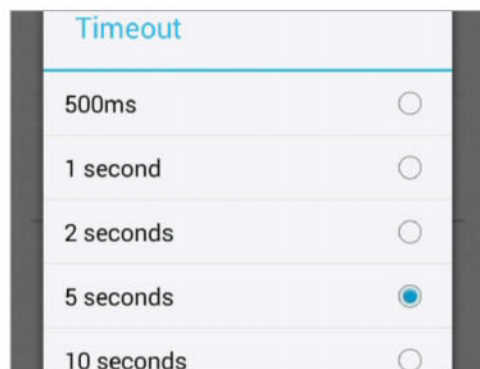
Give Noyze's many different settings a try and see which ones work the best for you.

### 4 Keep your time high

If you're using a theme with audio control, it's best to set the timeout high.

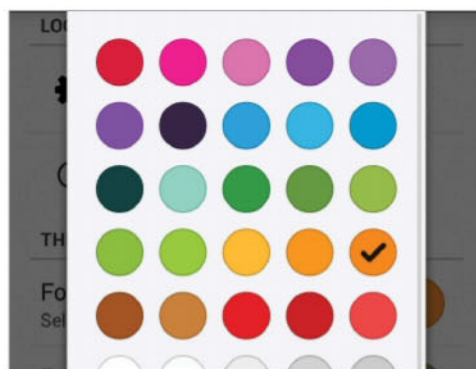
### 5 Noise-controlling fingers

Users of the Pro version can hide the volume bar when they use it to change media volume.



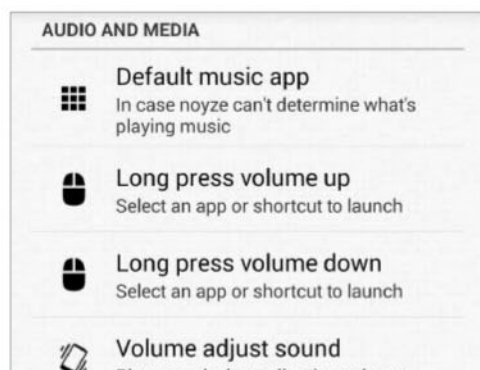
### 4 Take your time

The next option will let you pick the timeout speed of your volume controls. Tap on it and you'll see a list of different speeds. Pick one that suits and then tap on OK. You can always come back and change the timing if you need it faster or slower.



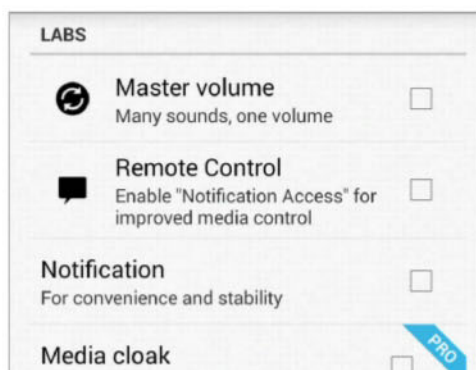
### 5 Pick your shades

Now it's time to tweak the colour scheme of your volume controls. Some templates will only let you change one of the colours, but the principle is the same. Choose a hue, then pick the transparency setting. When you're happy, tap OK. Once you're done, head to the main menu.



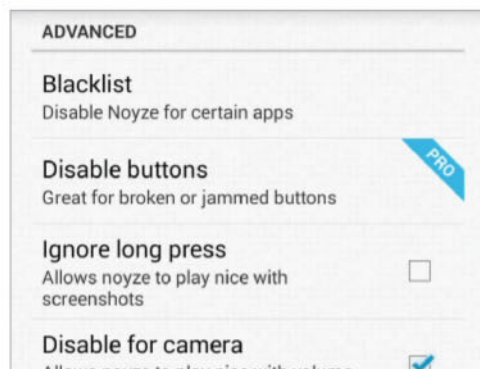
### 6 Audio and Media

Next, tap on the Audio and Media option. Here you can tinker with a few of the settings for your volume control. You can set your default music app, alter what long-pressing on the volume buttons does, and change the sound that plays when you're poking your volume around.



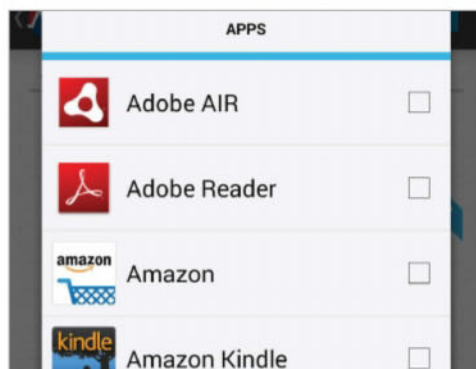
### 7 Enter the Labs

In the Labs section you'll find some more experimental options to mess around with. It's worth having a play around with them once you're more familiar with how the rest of the app works. You can set a master volume and set notifications access for quicker volume control as well.



### 8 A bit advanced

Next head to the Advanced menu. Here you can dig a little deeper into the settings. If you use your volume keys to take photos or screenshots, it's here you'll be able to disable Noyze from messing that up. You can block Noyze from being used on certain apps, too...



### 9 Block it out

In order to do that, tap the Blacklist option. You'll see a list of the apps you've got installed. Scroll down and choose the one you want to block Noyze for and select it. When you've chosen them all, you're good to go. Just tap OK and your new volume control will be ready.

## faq

Ask your own question online at [littlegreenrobot.co.uk](http://littlegreenrobot.co.uk)

### What's in the Pro version of the app that's not in the free version?

There are some extra options in the Pro version that free users don't have access to. After you've used the app for a week or two, it's worth having a look to see what you're missing. If it's something you think you could use, chuck a couple of quid at the app to obtain the other functionality.

### Which is the best template to use?

It all depends what you want to control from your volume bar. If you're just looking for something a bit different, the circular ones are quite nice. If you want to control your music, look at the Windows Phone or Blackberry options. Have a play and find what suits you best.

## Need help?

Got a problem with your Android phone or tablet? Get in touch with us...

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@lgrobot  
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Explore the limits of your Android device

# Hacker Zone

**044** Top 10 feature **048** Tips & Tricks **50** Tutorials



## TOP 10 HACKS

# TO BOOST SIGNAL

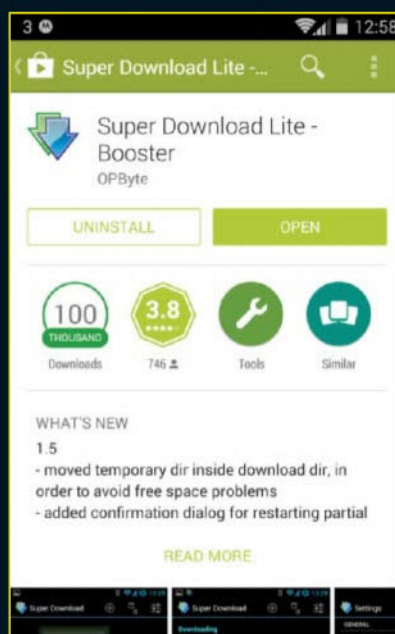
**Learn how to improve your signal strength and data speed**

A poor signal strength can mean dropped calls, no data connection or, when data is available, it can result in the speed being disappointing. While signal strengths are often good when we're in city centres, though, for many of us it is poor in our homes and it can be particularly bad when we're travelling in rural areas. Here we look at ways of

improving your signal strength and at various closely related issues such as achieving higher speed data and making sure you don't miss calls. When we talk about signal strength, we're not just talking about the strength of the cellular signal as shown by the bar graph at the top of your screen; also included are issues that relate to your Wi-Fi and Bluetooth signal, even though it's not nearly as obvious if this

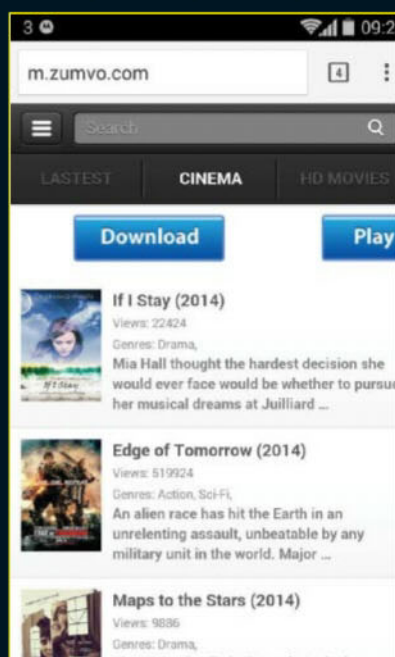
sort of signal strength is adequate. Most of our hacks make use of rooted apps, although additional hardware can make a big difference too. This is especially true when you're in a marginal coverage area as here it could make the difference between being able to make a call and being left high and dry. For this reason, we also take a look at a few add-ons that can boost your signal.

## 1. Supercharge your downloads with Super Download Lite



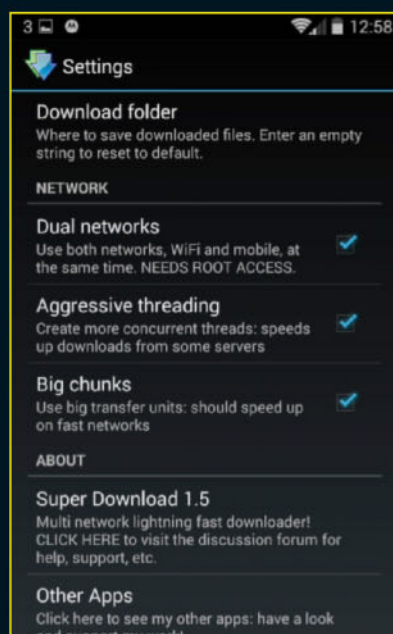
## 1 Install Super Download Lite

Install Super Download Lite, ideally on a rooted phone. On a non-rooted phone you won't be able use Wi-Fi and a cellular signal simultaneously, which is the main benefit on offer.



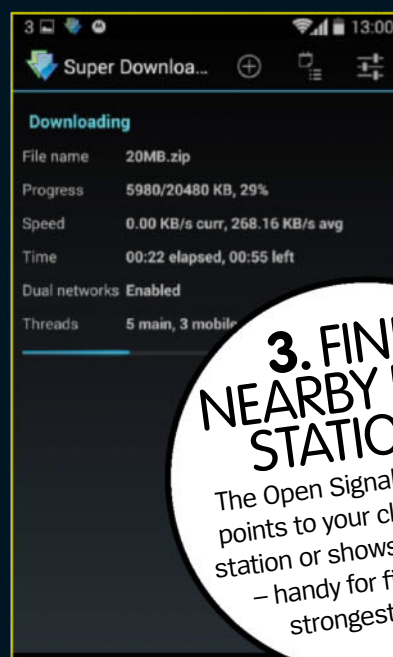
### 3 Start the download

Now start a download as you would do normally from your web browser or an application. Alternatively, touch the + icon in Super Downloader Lite and enter a URL.



## 2 Select Dual networks

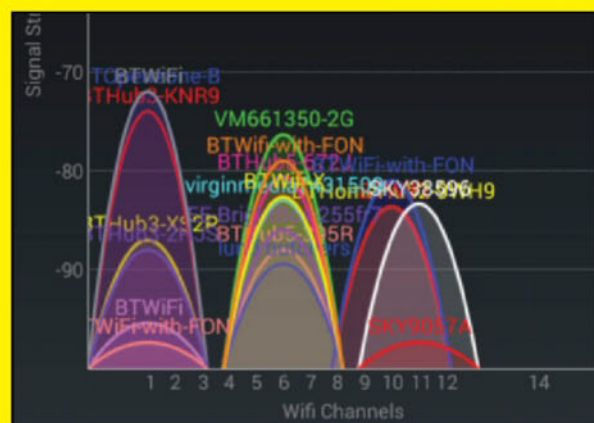
**2** In the Settings menu, under Network, make sure Dual networks is enabled. Ideally, your Wi-Fi and cellular speeds should be similar – if your Wi-Fi is by far the faster, the improvement will be marginal.



#### 4 Check progress

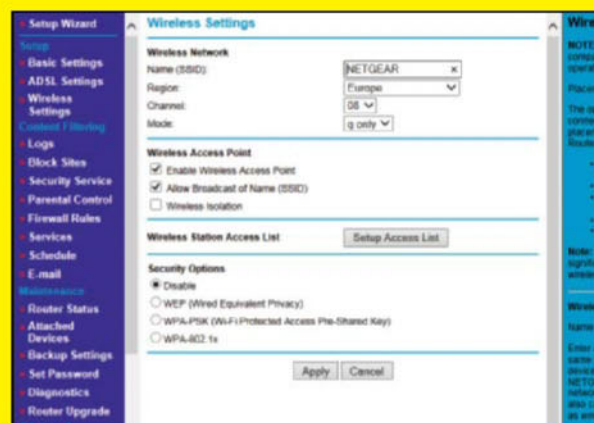
4 Pull down the notification bar and touch the icon to check progress. You'll see the name of the file being downloaded, the percentage complete, the average speed and the time taken.

## 2. Find the best Wi-Fi channel



## 1 Survey the neighbourhood

Turn your router off and use Wi-Fi Analyzer (the one from farproc) to display a graph showing which Wi-Fi channels are occupied by your neighbours and how strong the signals are.



## 2 Change channel

**2** Turn your router on and check again. If it shows up on a channel that previously had a strong signal, it would be good to change it using your router's setup menus.



## 2 Check signal strength

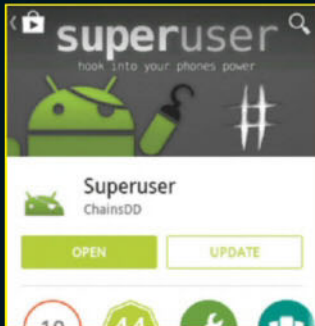
**3** Tap the eye icon and select Signal Meter. Walk around your house to check signal strength (numbers are negative so smaller is better) with a view to moving your router if necessary.

### 3. FIND NEARBY BASE STATIONS

The Open Signal Maps app points to your closest base station or shows it on a map – handy for finding the strongest signal.

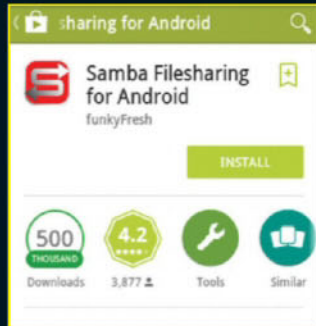


## 4. Simplify file sharing with your PC



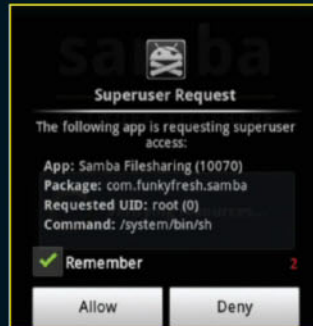
### 1 Make sure you're rooted

First of all you need to make sure that your smartphone is rooted. In addition, if it wasn't already installed when you rooted your phone, install the Superuser app.



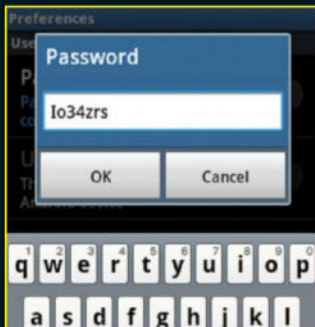
### 2 Install Samba

We're going to use Samba Filesharing for Android by funkyFresh to turn your smartphone into a networked storage device you can access from your PC. Download and install the free app.



### 3 Allow superuser access

Run Samba for the first time and the Superuser app will pop up asking if you'll grant access for Samba to have superuser access. Click on Allow before the time limit runs out.



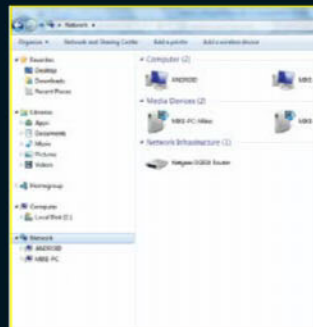
### 4 Set a password

It's a good idea to set a password, otherwise anyone will be able to access files on your phone. In the Settings menu, click on Password and enter something obscure.



### 5 Enable Samba

Initially, even if Samba's running, file sharing will be disabled. To disable it just select Enable from the menu. Samba's status screen will now show that it's been enabled.



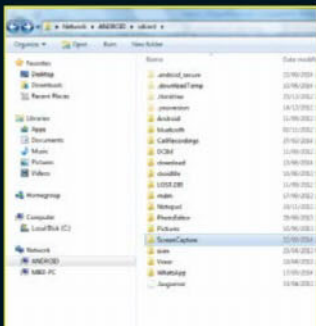
### 6 Head to your PC

Head over to your PC and open Windows Explorer. Take a look under Networks and you should see ANDROID listed. If not, check that you've correctly followed the steps so far.



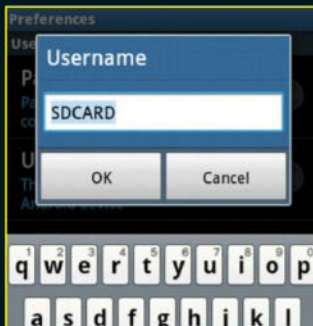
### 7 Log in to your smartphone

Double click on ANDROID and Windows will display a dialogue box for you to log in. Enter SDCARD as the Username, enter the password you provided in Step 4 and click on OK.



### 8 Access your SD card

You'll now be able to navigate through the files on your smartphone's SD card. Open them, copy them to your PC, or delete them as you would with files on your PC's disk.



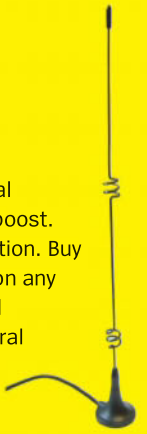
### 9 Change names

If you want to use a name other than ANDROID for your phone, or a username other than SDCARD, change them under NETBIOS Name and Username, respectively, in the Settings menu.

## 5. Signal-boosting products

### External antenna

The antenna in your phone is a compromise between size and performance so a larger external antenna can give your signal a boost. Solwise.co.uk has a huge selection. Buy a tri-band antenna so it'll work on any network and at any location. It'll probably come with a lead several metres long so place it where you get a good signal, perhaps near a window.



### Antenna coupler

Your phone almost certainly won't have an antenna socket and don't be tempted to try connecting it internally because, although it might work, you could ruin your phone. Instead, use a coupler that is held close to the back of your phone and connects to the antenna. Make sure it has the same sort of connector as the leads on the antenna.



### Bracket or mast and cable

If you're really struggling you might need to get an external antenna and mount it on the side of your house, in which case you'll need a mounting bracket. If you're away from home camping or caravanning, you might need a telescopic mast. In either case you'll probably also need a cable extension – make sure it has the correct connectors to match your antenna and coupler.



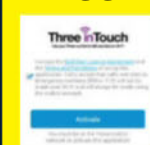
### Vodafone Sure Signal

If you're on Vodafone, the Sure Signal (£100/150) acts as a mini base station, transmitting a low power signal around your house that your phone will see as an ordinary signal. It connects to the Vodafone network by plugging into your Wi-Fi router. Third-party signal boosters that pick up the signal using an external antenna are illegal, even though using just an antenna is acceptable.

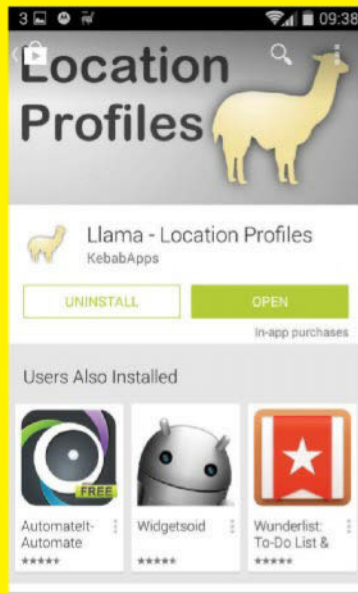


### Three inTouch

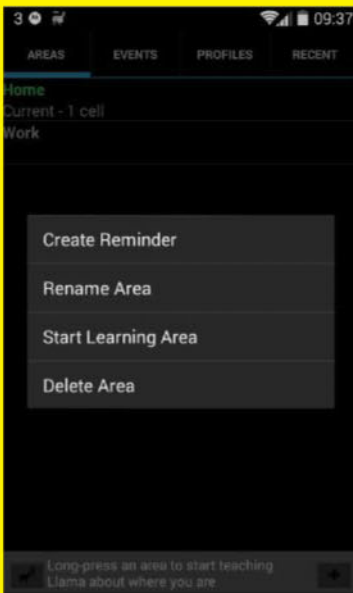
Other network operators offer a software solution to enable you to make calls where there's no signal. Three's app, for example, is called inTouch. As with Vodafone's Sure Signal, it connects to the network via Wi-Fi but it also communicates with your phone via Wi-Fi even though this is invisible to you. The app is free but you pay for calls normally.



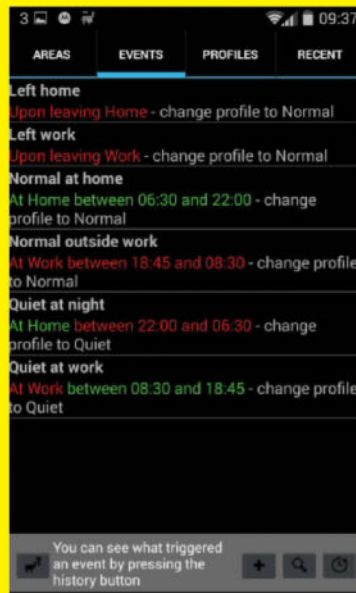
## 6. Never miss a call with Llama



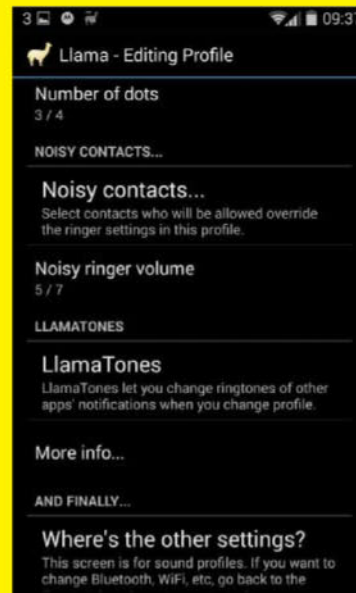
**1 Introducing Llama**  
The Llama – Location Profiles app causes your phone to behave differently depending on your location. It does lots more including increasing the ring volume when selected friends call. First up, install it on your phone.



**2 Define your locations**  
When you're at home, select the Areas tab, hold Home and select Start Learning Area. Tell it how long you'll be at home for and it'll record local base stations. Do the same when you're at work.



**3 Define your event preferences**  
With the Events tab at the top selected, hold any of the events (for example, 'Normal at home') and select Edit event. Define your preferences for that event, including which profile to use.



**4 Fine tune your profiles**  
On the Profiles tab, hold any profile and select Edit Profile. You can define ringtones and volumes but don't overlook Noisy Contacts – those contacts from whom you don't want to miss a call.

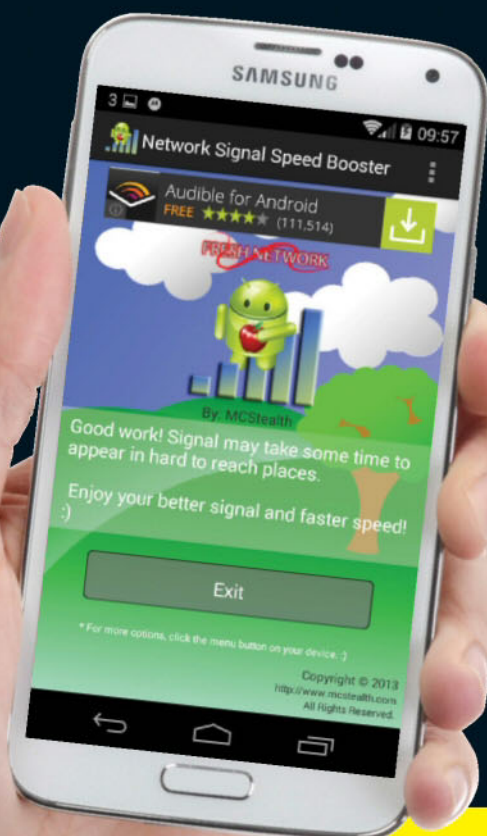
## 7. Boost your signal



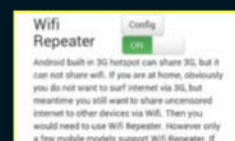
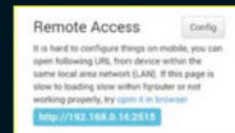
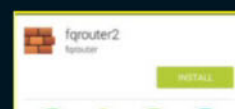
**1 How it works**  
The Network Signal Booster app works by resetting your phone's circuitry and reconnecting it to the closest base station.

**2 Start the application**  
If it's a while since you last used it and you want to boost your signal strength, just run the app.

**3 Wait a few minutes**  
The app will go about its business and keep you informed on what it's doing. When it's finished, simply press Exit.



## 8. Turn your phone into a Wi-Fi repeater



**1 Install fqrouter2**  
You might have to download a version from the developers' website for non-rooted phones, but the link appears on the Play store.

**2 Look for Wifi Repeater**  
Touch the Full Power button in fqrouter2. Scroll down past Remote Access. If the next heading isn't Wifi Repeater your phone doesn't support it.

**3 Turn on Wifi Repeater**  
If Wifi Repeater does appear, touch the off slider and wait for it to turn on. Your phone is now repeating the signal from your router.

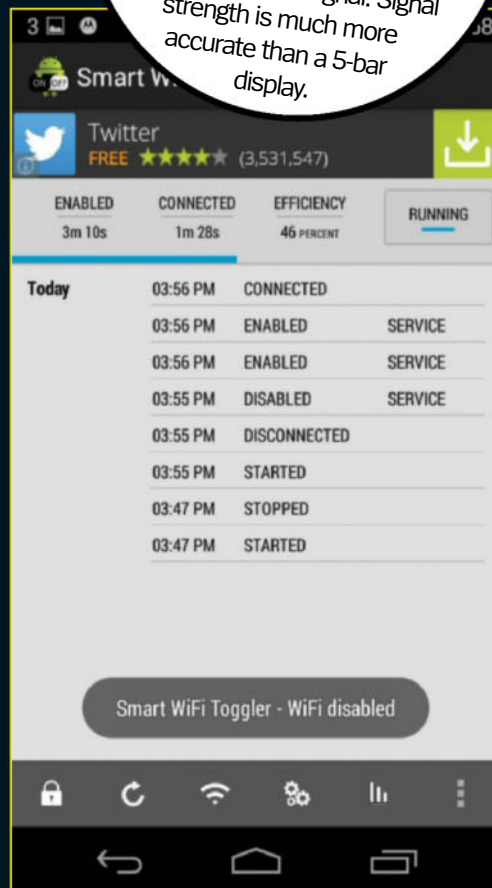
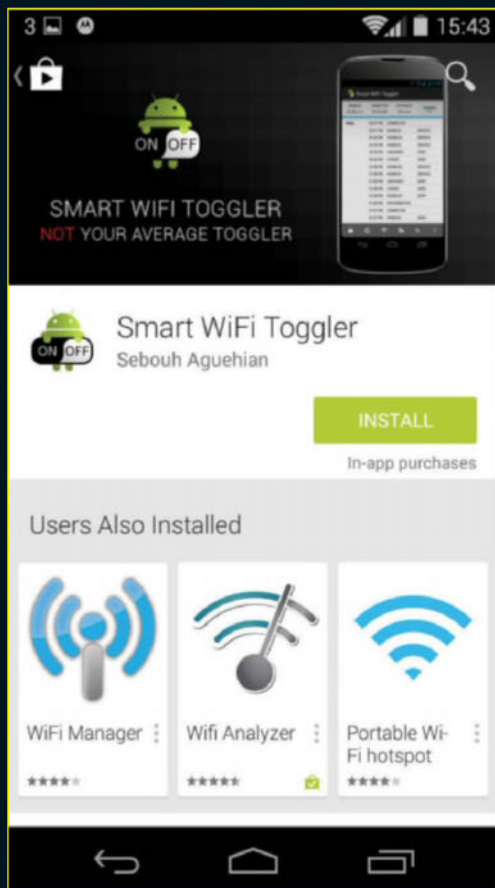
**4 Use Wi-Fi normally**  
Place the phone running fqrouter2 somewhere with a good Wi-Fi signal. Access Wi-Fi normally from other devices over a wider area.



## 9. Turn Wi-Fi on and off automatically

### 10. MONITOR YOUR NETWORK SIGNAL

The Network Signal Info app tells you everything you might ever want to know about your signal. Signal strength is much more accurate than a 5-bar display.



#### 1 Understanding WiFi Toggler

Smart WiFi Toggler periodically checks for an open Wi-Fi connection, saving your battery by only enabling Wi-Fi if you're near your router or a hotspot.

#### 2 Initial setup

Install and start the Smart WiFi Toggler app. Scroll through the introductory pages accepting most of the defaults but telling it to start up automatically.

#### 3 Automate Wi-Fi

After the last page, touch Change Log, touch the screen and hold, then, on the main page, touch Start. Enjoy your improved battery life.

## Signal boost FAQ

### Q. Do signal booster stickers work?

A. Stickers with an electrical circuit apparently printed on to them have been available for some time. They're supposed to boost your signal if you attach them to your phone's rear cover. Comparative tests have been carried on several of them and, on each occasion, the conclusion drawn was that they make no difference whatsoever.

### Q. What's your quickest tip?

A. You might be surprised that the Fresh Network Booster app in hack 7 really works. Because phones become less efficient after they've been turned on for a while, it forces your phone to reconfigure itself by turning the radio

circuitry off and back on again. Selecting and deselecting flight mode does just the same.

### Q. Which external antennas are best?

A. The best antennas are directional because they focus all the power from your phone in one direction and collect all the incoming signal from a single direction. However, if they're pointing in the wrong direction they'll be useless. Use Open Signal Maps (hack 3) to help you point it in the right direction.

### Q. How does signal affect battery life?

A. Having a good signal will make your battery last longer so there's another benefit on offer. The reason for this is that a phone can adjust its transmitted

power level and will tend to reduce it when it can see a strong signal from the base station.

### Q. Is 2.4GHz or 5GHz best?

A. 802.11n Wi-Fi has the option to work in the 5GHz band as an alternative to 2.4GHz. 2.4GHz will give you the greatest range but you have a much better chance of finding free channels in the 5GHz band. Also, depending on your device, it might offer improved speed.

### Q. Can I use a reflector?

A. People have built their own reflectors or used old satellite dishes to boost their signal. If you build your own it has to be exactly the right shape and your phone has to be at the exact spot where it focuses the signal. It's okay for boosting a dangle's signal but not really a phone.

## status update

Which devices are best for the hacking scene?

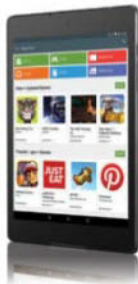
### Nexus 9

**Rooted?** Yes

**Active Development:**

High

Google's brand-new device has already been rooted, with hackers eager to exploit the 64-bit architecture.



### Galaxy Note 4

**Rooted?** Yes

**Active Development:**

Medium

While this handset is redundant as a mainstream device, it's low price makes it ideal for first time hackers to practise on.



### Amazon Fire HD 6

**Rooted?** No

**Active Development:**

Low

Amazon's latest tablet has yet to see any significant development on the XDA forum.



### Moto 360

**Rooted?** Yes

**Active Development:**

High

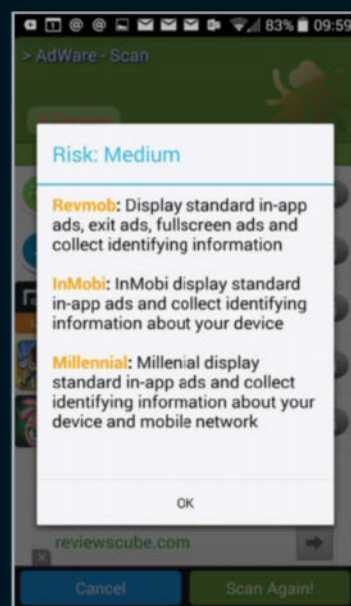
There are lots of alternate watchfaces and apps available for hacked Moto 360's.



# Tips and tricks

## Which app is displaying homescreen pop-ups ads?

Hate ads? Many free Android apps are ad supported, and most of the time we can put up with their developer's attempts to generate some cash. But what happens when the developer abuses this grace?



Once you track down which app is displaying ads on your homescreen, delete it

The phenomenon of pop-up ads on Android, usually occurring when you exit an app, is not one of the platform's finest moments. Whereas notification ads can be disabled in Android 4.1+ (Settings>Apps, identify problematic app then uncheck Show notifications), exit ads are trickier to deal with.

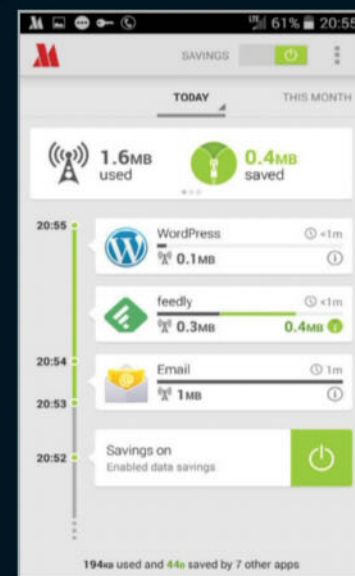
Begin by tracking down the ad responsible for the pop-up. Close all apps or restart your device, and then consider how long the pop-up has been occurring and compare this with any new apps you have installed. Once you've narrowed down the culprit you can uninstall it.

For ads that are harder to trace, the free AdWare app detects connections to ad networks and can help you to trace the app causing the problem.

## Compress mobile data

Forget hacking your device a moment: think about hacking your wallet instead. How do you squeeze more data out of a limited mobile Internet plan?

Other than connecting to every open Wi-Fi network you can find, keeping your mobile Internet usage low can prove very tricky. Fortunately there is a solution in the shape of compression tools. These range from Chrome's Reduce data usage feature (Menu>Settings) to third-party apps like Onavo and Opera Max, which are both



Apps like Opera Max give you more data, vital for limited mobile internet plans

available in Google Play. All of these tools work in the same way, which is to divert your traffic via their own servers, where the data is compressed and then sent to your phone.

The result is a more streamlined browser experience that can be faster and certainly more efficient with your mobile data, enabling you to spend more time browsing!

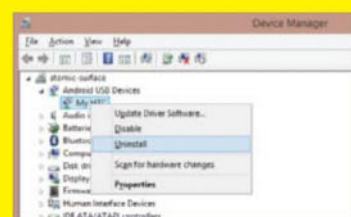
## Got the right time?

Persuading your Android device to

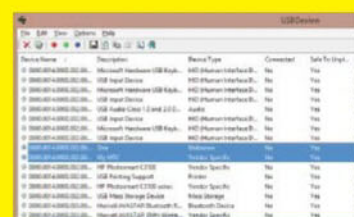
## quickhacks

### Connect to Windows over ADB

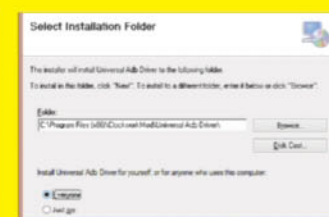
Preparing to unlock a device, back up or simply test an app on your Android device can be a tricky business if you're experiencing problems connecting to Windows over ADB...



**1 Connect to your PC**  
With a USB cable, connect Android to Windows. Open Device Manager and expand the entry for Android. Right-click the ADB driver and select Uninstall, ensuring that you check the option to delete.



**2 Discarding bad drivers**  
Download a USB device monitor such as NirSoft's free USBDeview. This displays all of the installed USB drivers. Remove those labelled grey and with Google, ADB, Android or your device in the title.



**3 Universal driver**  
Download Koush's Universal ADB Driver from [www.koushikdutta.com](http://www.koushikdutta.com) and install it. Next, connect your Android to Windows via USB and wait for the correct ADB drivers to load.



**Share your tips**  
Discovered a great hack or  
tweak? Let us know!

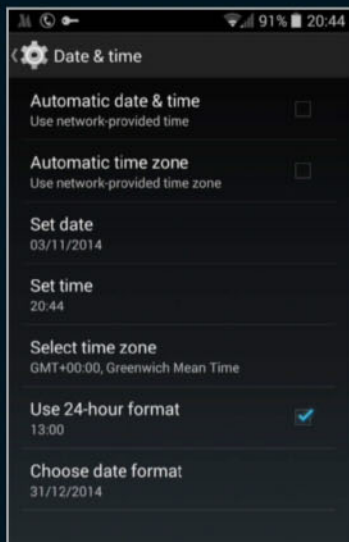
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[qa@littlegreenrobot.co.uk](mailto:qa@littlegreenrobot.co.uk)  
Is there anything you'd like to see us  
cover in the mag? Drop us a line!

display the right time can be tricky. With the incorrect date or time set (something that can happen if your phone has been hard reset following problems) you'll find various faults occur, from an inability to connect to Google Play and cloud services to emails not being downloaded. Worse still, you might not even notice that the date and time are incorrect.

If your phone is prone to date and time-based faults, a good solution is to use the automatic options in Settings>Date & time.

You're looking specifically to enable Automatic date & time and Automatic time zone, each of which uses settings provided by your mobile network. As well as ensuring that your phone shows the correct date and time – solving problems with online services in an instant – giving control of these things to your mobile network means that when you travel abroad there is no need to adjust your phone to match the local time.



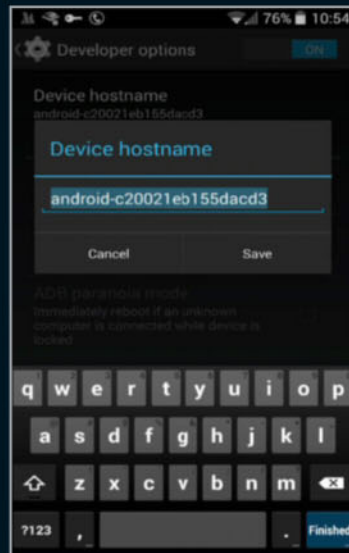
Put control of your phone's date and time into the hands of your mobile network

## Change your hostname

What is your Android device called? You might think of it as 'My Android' or 'My HTC', but is it set up with this name? Most importantly, how does it appear on a network?

If you're planning some network projects with your Android smartphone or tablet involved, it might be a good idea to set a useful, memorable hostname, rather than the default (a variation on android-randomstring in most cases).

In Android 4.4, this is achieved in Settings>Developer options (which



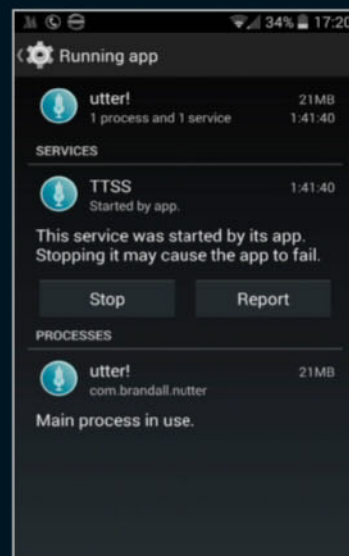
A shorter device hostname is useful for networking projects

you should have enabled by tapping Build number seven times in Settings>About>Software information>More) where you will find Device hostname. Tap this to open a dialogue box and set a new hostname, tapping Save when you're done.

If this option isn't available, don't worry. Use the free DNS Hostname Changer, a simple root app which will do as the name suggests.

## Deal with apps that won't respond

Sometimes, your favourite mobile apps hang, slowing your phone. It might be because another service (perhaps email or Twitter) is updating in the background, but whatever the case it is a frustrating scenario that is tough to deal with. The initial reaction is to open the task switcher and close apps until Android's performance improves, but a better option is to open Settings>Apps>Running to see what processes are running and stop those that you suspect are being problematic.



Unresponsive apps can be stopped, or even uninstalled from your device

# Jargon Buster

Get up to speed on all the terms you need to know when hacking your phone **OS**

Short for 'operating system'. Often the Android ROM will be referred to as the OS – this just means the system files on the Android device that make up your user experience, similar to Windows, Mac OS X or Ubuntu on a desktop computer.

## ROM

Stands for 'read-only memory'. In the context of Android, the ROM refers to the files that make up the operating system installed on your device. Gaining root privileges allows for replacement of the standard ROM with a custom one.

## Root

'Rooting' your phone gives apps access to parts of the OS that are normally hidden from consumers. This enables you to run more powerful software and install custom ROMs on your phone.

## ROM Manager

An app available from the Android Market that enables you to install a whole new version of your OS with a single click. It requires a rooted phone to use and is ideal for those new on the scene.

## Titanium Backup

This app from the Market enables you to back up everything on your phone – apps, data, settings and all. It means that you can restore your phone to how it was, even after you've updated or changed the ROM.

## Unrevoked

Available from [www.unrevoked.com](http://www.unrevoked.com), this is a one-click tool that can be used for rooting many popular HTC smartphones.

## ADB

Stands for 'Android Debug Bridge'. ADB is mainly used for software development, but it also has some uses for hacking your phone. It can be used to push files onto the system folder, for instance.

## Nandroid

You might come across the phrase 'perform a Nandroid backup'. This means using a custom recovery tool to make a back-up image of everything currently on your phone: OS, apps, data, etc. It's very useful should you wish to restore your phone to its previous state later.

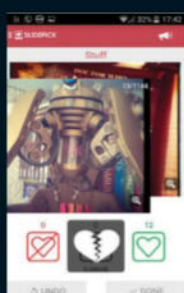
## Radio

'Radio' refers to the software on your Android device that deals with making phone calls and data connections. Updating your radio version can bring better battery life and signal strength to your device. Some ROMs require the latest radio.

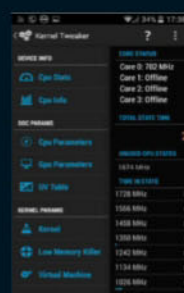
## Flash

The storage in your device comprises flash memory, a type of solid-state storage. The terms 'flash' or 'flashing' mean installing new software onto your device's storage.

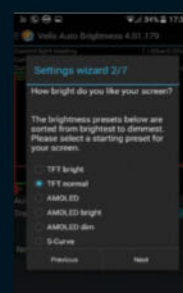
## Hacking the easy way Three tweaking utilities that may or may not require root access



**SlidePick**  
**Price:** Free  
**From:** Google Play  
**Need root?** No  
Do you have photos spread across devices and cloud accounts? Use SlidePick to quickly sort them, simply by sliding the image into the preferred folder, enabling a quick photo cleanup.



**Kernel Tweaker**  
**Price:** Free  
**From:** Google Play  
**Need root?** Yes  
Kernel tweaking apps are usually a bit of a hit and miss affair but this utility seems to really work. Tune CPU and GPU, undervolt, tweak the kernel and more.



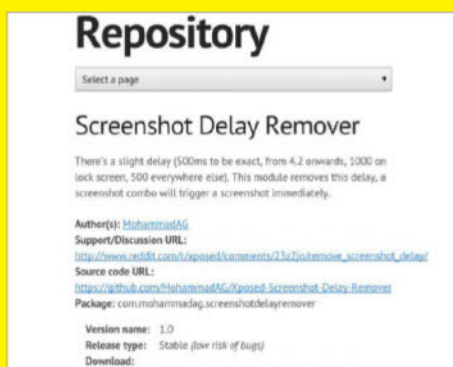
**Velis Auto Brightness**  
**Price:** Free  
**From:** Google Play  
**Need root?** No  
Using a stock ROM? The chances are that auto-brightness on your phone isn't great. Use Velis Auto Brightness to set profiles depending on your environment.

# Remove screenshot delay with Xposed

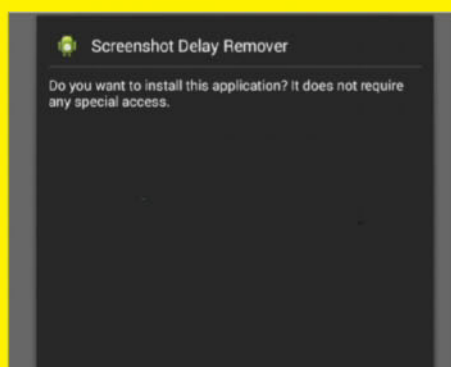
Use an Xposed Framework module to remove the delay from taking screenshots

Since Android 4.2 there's been a slight delay when you take screenshots of your phone or tablet. It's likely you haven't noticed, but if you take a lot of screenshots, then you want to make sure you're capturing the screen at the precise moment you tap, whatever buttons you tap to snap. If you've got a rooted device with Xposed Framework installed you can cut that slight delay

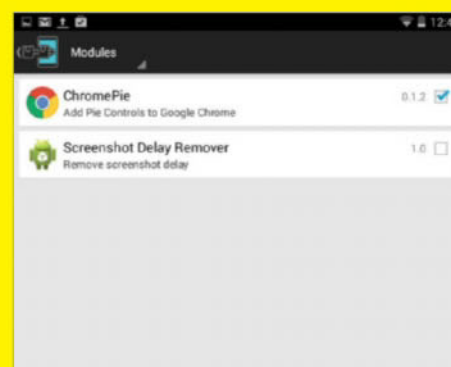
down to nothing by installing a new module. In this tutorial we'll show you how to do it, and give you the links you'll need to get the module installed. It's a pretty simple process, but you'll need to set a bit of time aside and make sure you're on a Wi-Fi connection if you want to make everything run smoothly. When you're ready, head to step one and we'll get started.



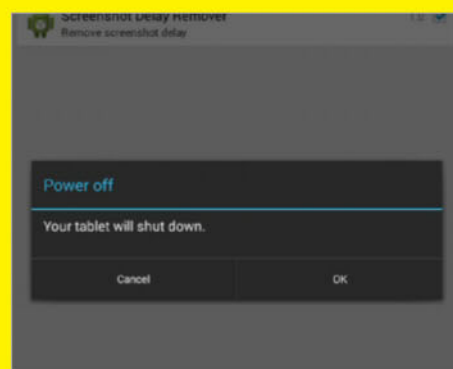
- 1 Download the module**  
First you'll want to point your web browser to this link [tinyurl.com/kray2p5](http://tinyurl.com/kray2p5) where you'll be able to download the module you need. Make sure your device is set to allow downloads from unknown sources. If you're given the option, you should select your browser to open the file.



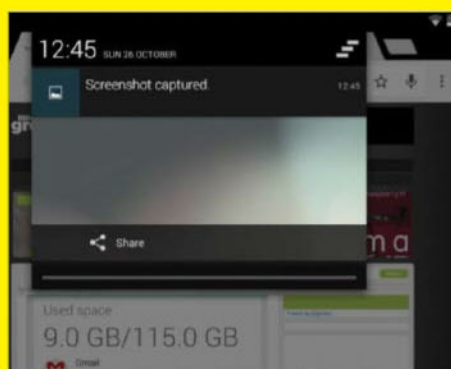
- 2 Install the module**  
Once downloaded, tap on the notification in your notifications drawer. This will install the module to Xposed. The app doesn't require any special access, but it'll still ask permission. Once it's installed head on over to the Xposed Framework app to find the module.



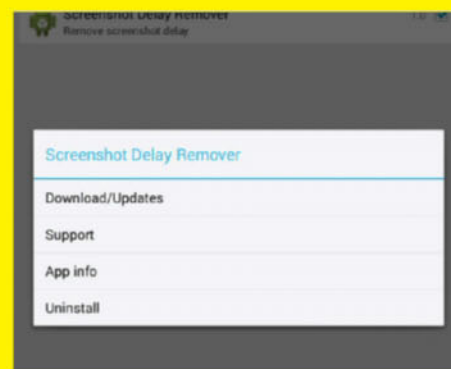
- 3 Find the module**  
Head to the module list in the Xposed Framework app and scroll down until you find the one named Screenshot Delay Remover. You'll see a check box to the right of its name. Tap that and Xposed will get the module set up and running on your device.



- 4 Reboot your device**  
Now you'll need to reboot your phone or tablet so that Xposed can make the necessary changes to your device. It shouldn't take too long, and once the reboot is finished you should notice that there's no gap between tapping to take a screenshot and the screenshot being taken.



- 5 Check out your snap**  
Take a few screenshots to make sure everything's working as it should be. It might take a little getting used to, but you should notice a much quicker response to your snapping. When you're happy, head back to the Xposed Framework app for some tinkering.



- 6 Have a long press**  
When you're back in the Xposed Framework app, long press on the Screenshot Delay Remover module to bring up some options. You can uninstall the module from here. The most important is the support one, which takes you to a Reddit thread with some troubleshooting hints.



# FOR THE GNU GENERATION

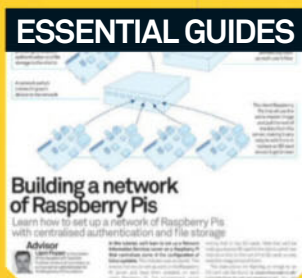
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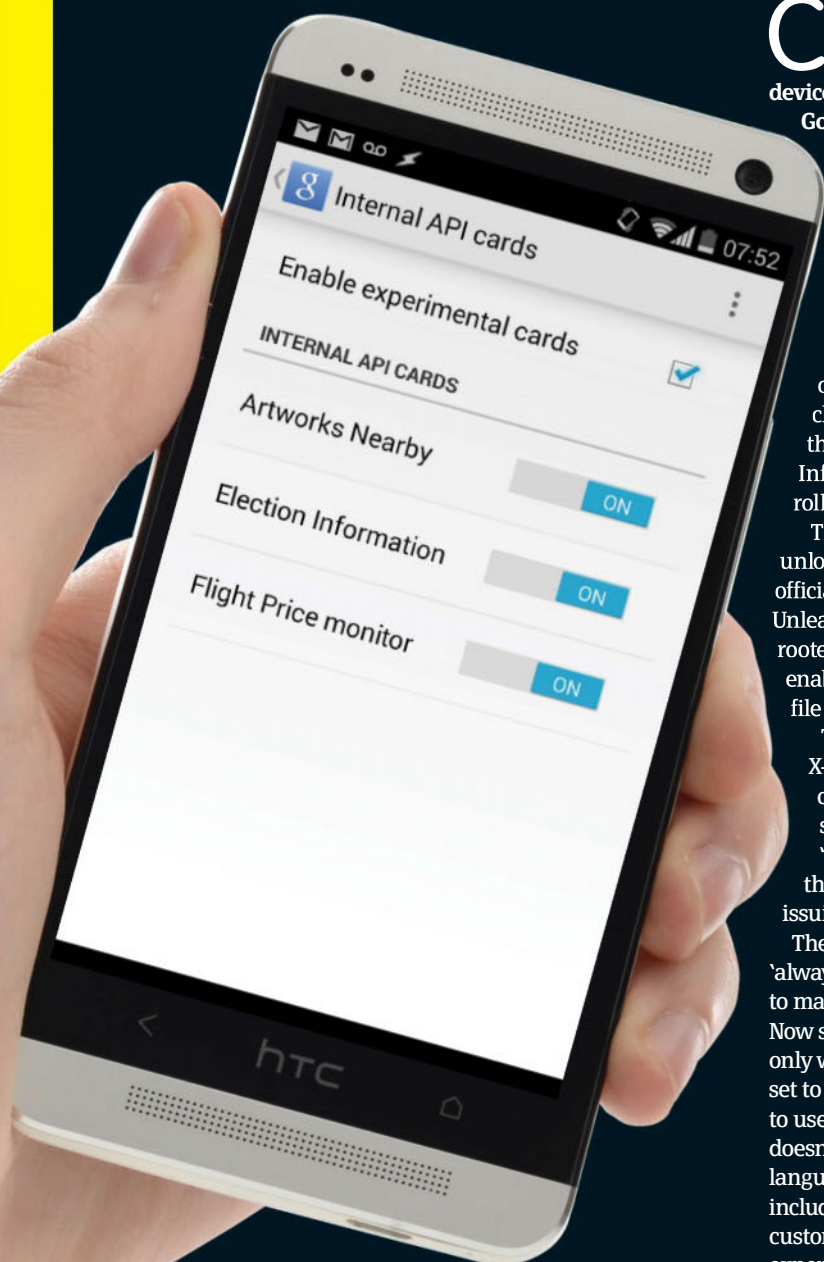
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Works with >> Varies with device Difficulty >> Intermediate

# Get more out of Google Now

Supercharge your Google Now with experimental cards and Moto X-style touchless controls



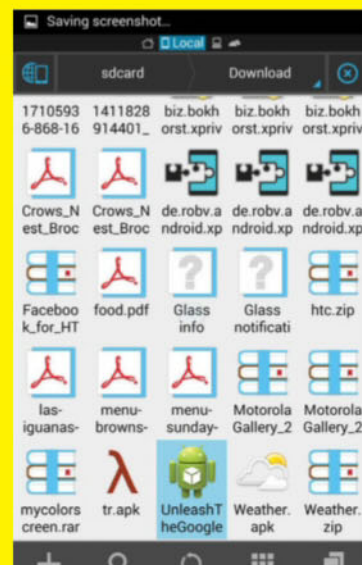
**C**hances are you're already familiar with the Google Now app, but if you've rooted your device, you can unlock additional Google Now features.

The first feature is experimental Google Now cards, including Artworks Nearby and Flight Price Monitor. Artworks Nearby helps you locate art-based activities, while Flight Price Monitor track any flights you've been browsing online, and notifies you of price changes. At the time of writing, there was also an Election Information card, which was later rolled out for the US Midterms.

This tutorial shows you how to unlock these cards ahead of their official rollout using UnleashTheGoogle. You'll need a rooted device with 'Unknown sources' enabled in its Settings menu, and a file manager such as ES File Explorer.

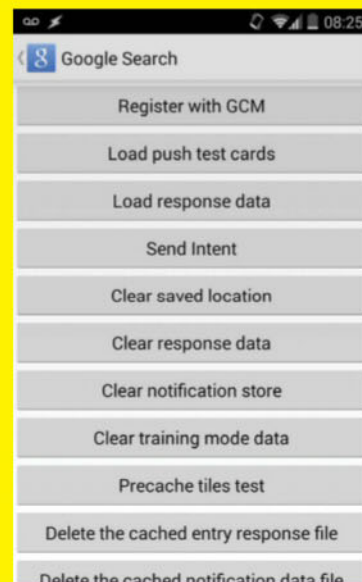
The second feature is to add Moto X-style Touchless Controls, so you can launch Google Now from any screen, simply by speaking the "OK Google" command. You can then perform various tasks by issuing further vocal commands.

There are two ways to enable this 'always listening' mode. The easiest is to make changes inside your Google Now settings, although this method only works if your device's language is set to US English. The other method is to use Open Mic+ for Google Now, and doesn't require you to change your language settings. This app also includes some interesting options for customising your 'always listening' experience. In this tutorial we will cover both methods.



## 1 Unleash Google

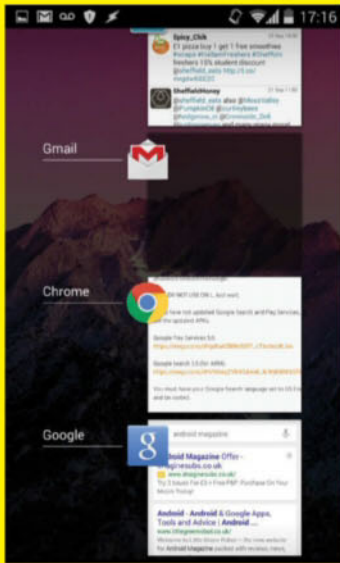
Visit [forum.xda-developers.com/att-galaxy-s5/themes-apps/unleash-google-hotword-detection-t2803261](http://forum.xda-developers.com/att-galaxy-s5/themes-apps/unleash-google-hotword-detection-t2803261) and download the UnleashTheGoogle apk. Use a file manager such as ES File Explorer to find the downloaded file. Tap and select Install. Once installation is complete, launch UnleashTheGoogle.



## 6 Testing options

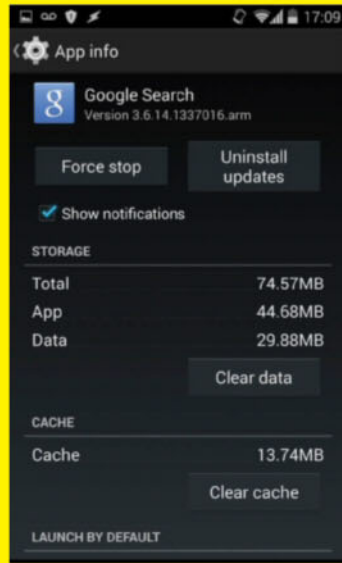
Take a look at the various options, but be aware that tapping any of them will perform the associated action – so approach buttons like Start video call with caution! Another tweak you can make, is to enable Google Now's 'always listening' feature so it responds "Okay Google".





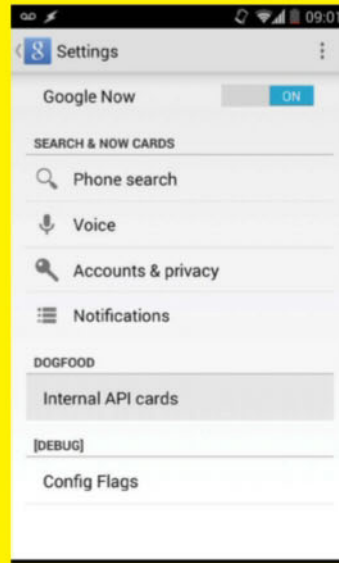
## 2 Perform a search

Grant the app super user permissions, and UnleashTheGoogle will automatically close. For your changes to take effect, you need to restart Google Search, so swipe to Google Now and perform a quick Google Search. Then, tap your Recent apps button. Find Google Search in the list, and long-press on it.



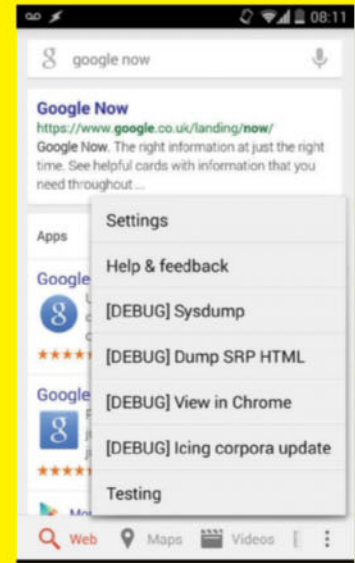
## 3 Restart Google Search

In the pop-up, tap App info and select Force stop. Exit the App info screen. Then, tap the Recent apps button again, find Google Search and remove it from the list by left-swiping. Launch Google Now and tap its three-dot menu icon. Select Settings and you'll see some new options.



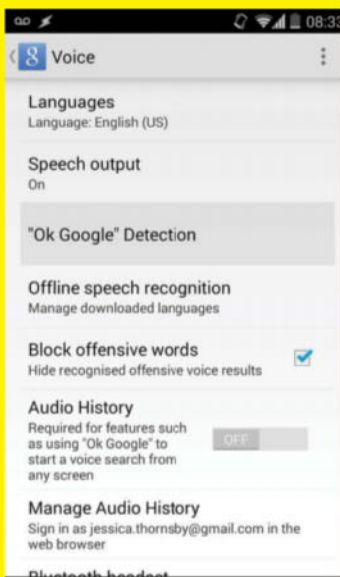
## 4 Experiment

Tap Internal API cards and select Enable experimental cards. Make sure all Internal API cards are switched on. Return to the main Google Now screen for these changes to take affect. These experimental cards will now appear in your Google Now feed as and when they become relevant.



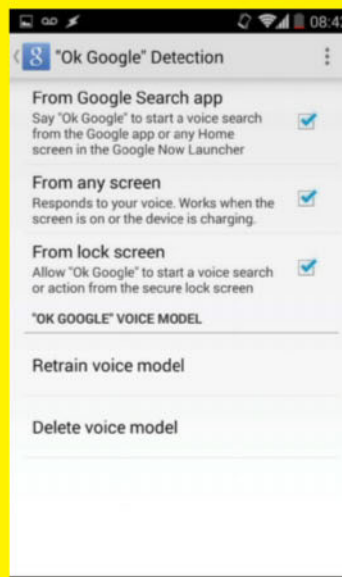
## 5 Google Now APIs

To access more UnleashTheGoogle features, perform a search in Google Now. On the search results page, tap Google Now's three-dot menu icon. You'll notice some new options in the menu. To take a closer look at all the API actions available to Google Now, tap Testing.



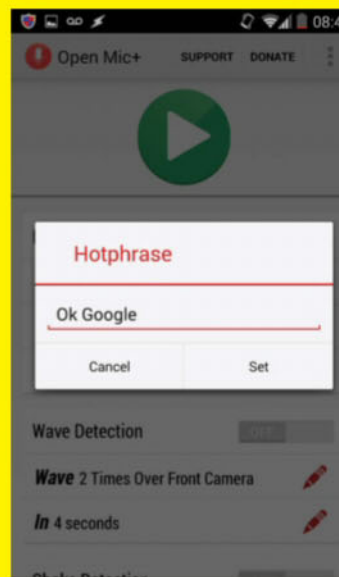
## 7 Language settings

The easiest way to access this feature is by making some changes to your Google Now settings, so tap the app's menu button and select Settings. Then, tap Voice followed by Languages and choose English (US). You can then select OK Google Detection and enable From any screen.



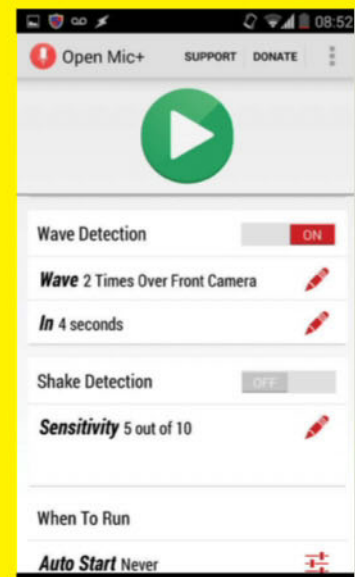
## 8 From lockscreen

Read the information, then tap I agree. The final step is training Google Now to recognise your voice by saying "OK Google" three times and tapping OK. You may also wish to enable "OK Google" from your lockscreen, by returning to the OK Google Detection screen and selecting From lockscreen.



## 9 Open Mic+

Another way to enable "OK Google" from any screen is to download Open Mic+ for Google Now from the Google Play store. One advantage of using this app, is that you can replace "OK Google" with a phrase of your own. Launch the application, tap Say and type your new hotphrase.



## 10 Using Wave Detection

Another Mic+ option to explore is launching Google Now by waving in front of your device's camera. To enable this feature, tap the Wave Detection slider so it's in the On position. You can also change the number of times you need to wave, and in what period of time.

Works with » Varies with device Difficulty » Advanced

# Build ROMs from source with Architekt

Learn how to compile any ROM from source on Mac, Windows or Linux

**A**lthough you can download most Android ROMs in ready-to-flash form, there are some benefits to learning how to build ROMs from their source code. The major benefit is that you'll always be able to access the very latest version of the ROM before it's packaged ready for 'general release' – although be warned that the most up-to-date version of a ROM's code isn't always going to be the most stable. You can also make significant changes to a ROM's code before compiling it, and the experience of compiling a ROM will give you a deeper insight into

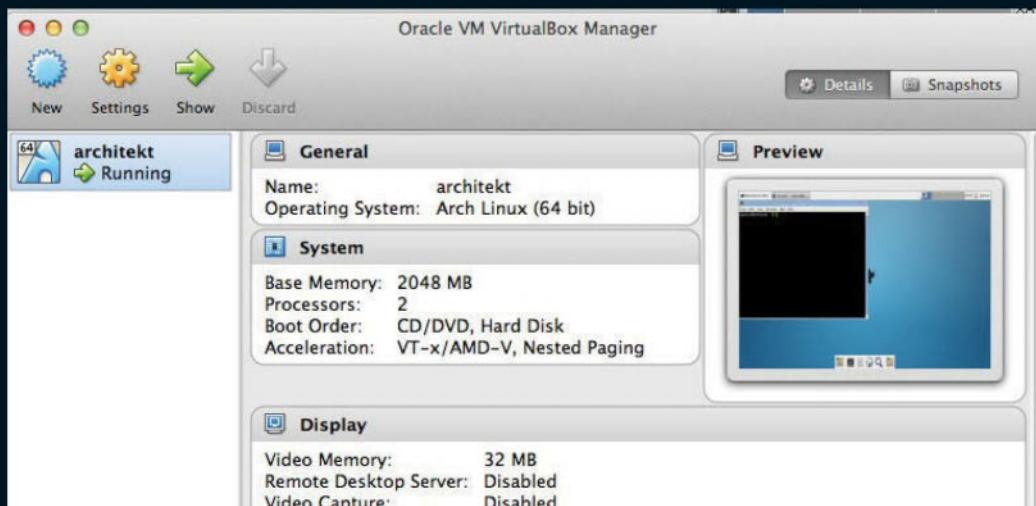
how Android works 'under the hood.'

This tutorial shows you how to build your chosen ROM from source, using the Architekt virtual machine (VM). Architekt is a handy, single download that includes many of the tools and packages you'll need to start compiling ROMs. This tutorial is based on Mac, although Architekt works on Windows and Linux, too.

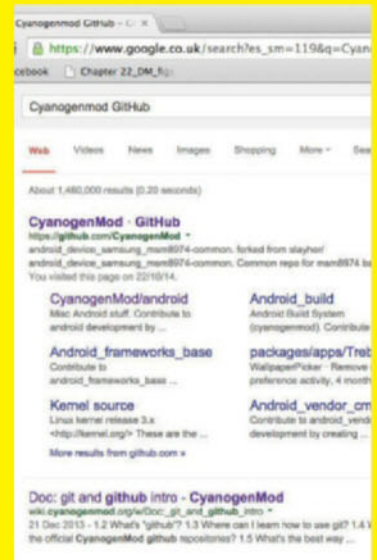
This tutorial concentrates on setting up the Architekt virtual machine and downloading the source for your chosen ROM, but it also provides a brief overview of how to prepare your ROM ready for flashing to a device.

Because of the variety of Android ROMs and devices available, this is only a general outline – always check the instructions for your particular ROM and device, especially if you're planning to flash the ROM after you've built it.

**"Includes many of the tools and packages you'll need to compile ROMs"**



Use VirtualBox to set up Architekt and compile your ROM



## 1 Choose your ROM

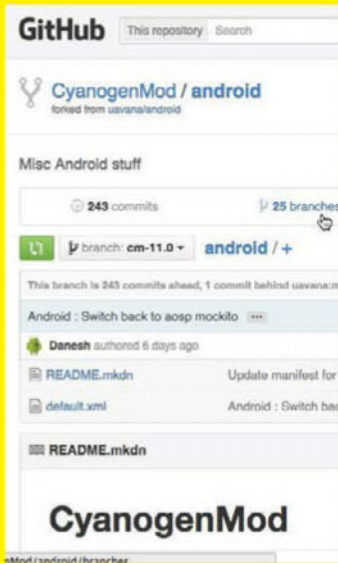
Find the GitHub repository that contains the ROM you want to build. The easiest method is to Google the ROM followed by "GitHub" ("Cyanogenmod GitHub.") Most GitHub repositories contain multiple branches, so the next step is deciding which branch contains the version of the ROM you want to build.



## 6 Open the Terminal

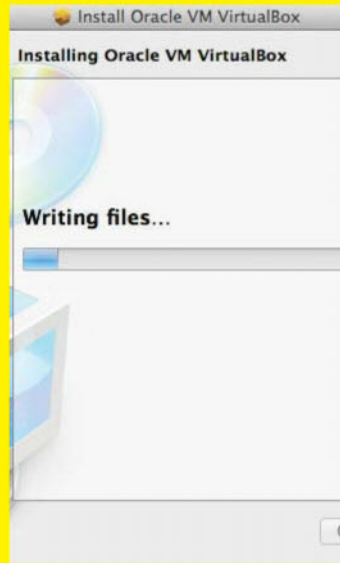
You'll see a few icons towards the bottom of your virtual machine. Click the 'Terminal' icon; this is how you'll communicate with GitHub. Start by entering your name (git config --global user.name "Name") and email address (git config --global user.email "name@gmail.com") Next, you'll prepare your repository.





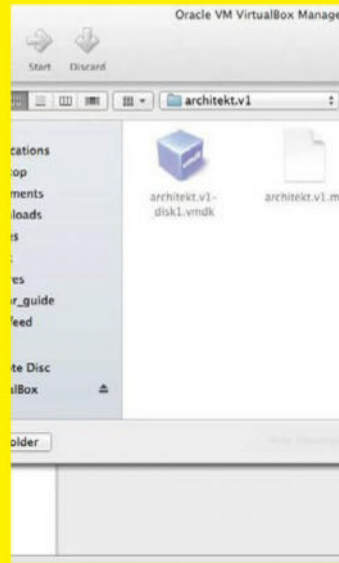
## 2 Choose your branch

The easiest way of choosing which branch to compile is to click the Branches tab and look in the Active branch section. Alternatively, check the ROM's website or blog for clues about what's included in each branch. Once you've chosen your branch, make a note of its URL.



## 3 Install VirtualBox

Head to [www.virtualbox.org/wiki/Downloads](http://www.virtualbox.org/wiki/Downloads) and download VirtualBox. Once complete, open the file and install VirtualBox by following the instructions. Then, go to [forum.xda-developers.com/chef-central/android/vm-compiler-architekt-android-rom-t2841372](http://forum.xda-developers.com/chef-central/android/vm-compiler-architekt-android-rom-t2841372) and download Architekt. Unzip the file.



## 4 Architekt VM

Launch VirtualBox, then open its File menu and select Import Appliance. Click the little 'Choose a virtual appliance file to import' icon that appears alongside the empty textbox, then navigate to the unzipped Architekt folder. Select the architekt.ovf file, and click Open. Click Continue>Import.



## 5 Launch your VM

Once Architekt has loaded, click the Start icon. In the Terminal, select Arch Linux and hit the Return key on your keyboard. When you're prompted to login, enter the username 'android', then press Return. Enter the password 'android' and press Return again. The virtual machine will then load.



## 7 Initialise your repo

Enter the command: 'repo init -u git://github.com/' followed by the URL of your branch, for example: 'repo init -u git://github.com/CyanogenMod/android.git -b cm-11.0.' Press Return and you should see a message that the repo has been initialised in /home/android.'



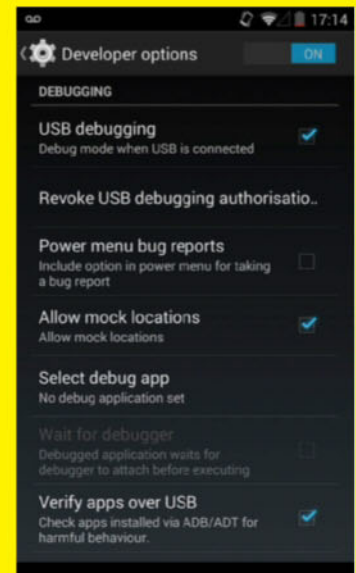
## 8 Download the sources

You can now download the ROM from source, which may take a few hours. Run the command "repo sync," and be prepared to wait. Once the sources have eventually downloaded, ensure your Terminal is pointing at the source's root by issuing the command 'cd android/system.'



## 9 Download device config

You now need to download the configuration and kernel source for your specific device. Run 'source build/envsetup.sh,' followed by 'breakfast (device name).' The next step is extracting the proprietary, binary blobs from your device, so attach your device to your computer using the USB cable.



## 10 USB debugging

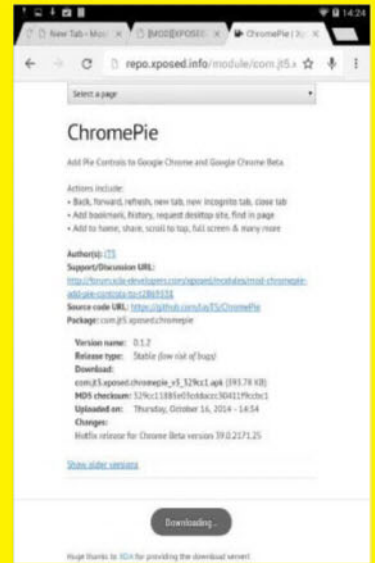
Ensure your device has USB debugging enabled. The location of these files varies between devices, so you'll need to do some Googling to work out where you should point the Terminal. Extract the files using './extract-files.sh,' and then build your ROM with the following command 'brunch (device name).'

Works with >> Varies with device Difficulty >> Intermediate

# Add swipe controls to Chrome

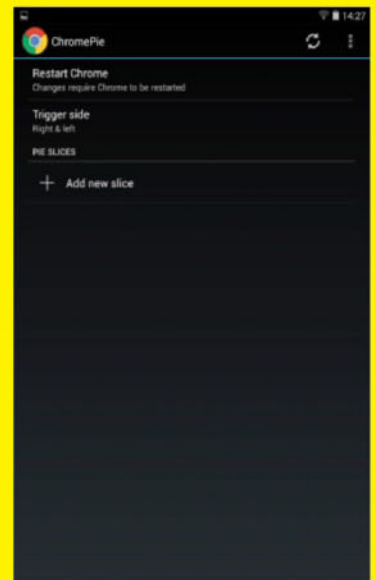
Use the clever ChromePIE Xposed module to add quick swipe controls to Chrome

It's always fun to have a play around with new things, and if you're confident enough to root your Android device, you get an almost infinite number of new things to play around with. In this tutorial we're going to show you how you can add some pretty cool extra controls to your Chrome browser using an Xposed Framework module called ChromePIE. It's pretty easy to do, but you will need to make sure of a few things before we get started. First and foremost you'll need a rooted device. We performed the hack on a Nexus 7 rooted using WugFresh ([wugfresh.com](http://wugfresh.com)). You'll also need to have the Xposed Framework installed on that device. You can grab that by heading to this link right here ([tinyurl.com/nm4eups](http://tinyurl.com/nm4eups)). You'll want to download it on to your device, and make sure your settings enable you to install apps from unknown sources. When you've done all of that it's just a case of downloading and installing the ChromePIE module and setting everything up just the way you'd like it. We've added a few hints and tricks into the tutorial as well to make sure you're getting the most out of your ChromePIE experience. You'll need a few minutes set aside to do this one, as there's at least one reboot necessary, but when you're ready head on over to the first step and we'll get started.



## 1 Download the file

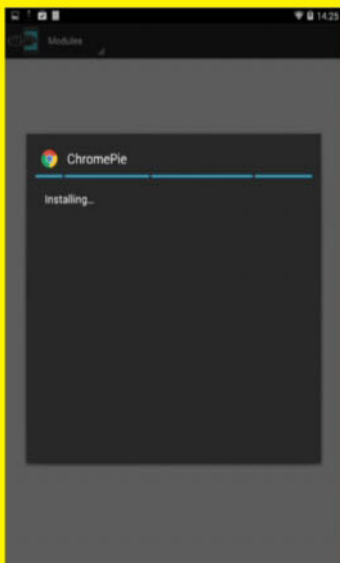
Head on over to this page ([tinyurl.com/hqp42k6](http://tinyurl.com/hqp42k6)) on your smartphone or tablet and download the ChromePIE module. The download link is about halfway down the page. Tapping the link might give you the option to open it directly in Xposed Framework, so instead long press and save the file directly.



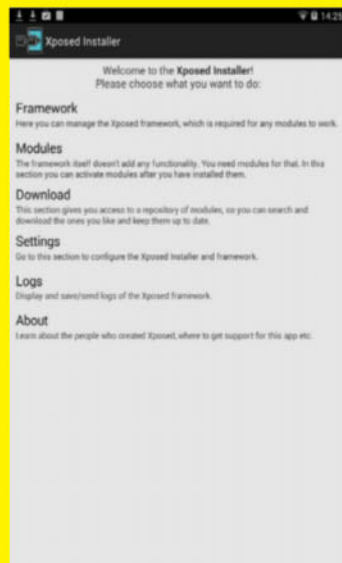
## 6 Set your new buttons

The main menu of the application should be pretty sparse. This is where you can add new buttons to your pie. First choose where you want to be able to slide your pie in from. Both sides is probably best, depending on how you hold your device.





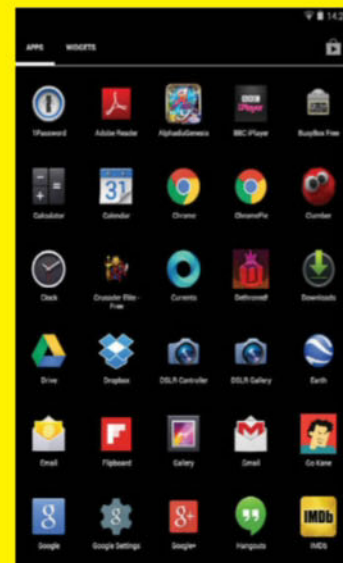
**2 Install the pie**  
Next simply tap on the APK file that you just downloaded. Agree to any permissions that are suggested and it should begin to install on your device. Remember you'll need to make sure you can install apps from unknown sources. When it's installed head on over to the Xposed Installer.



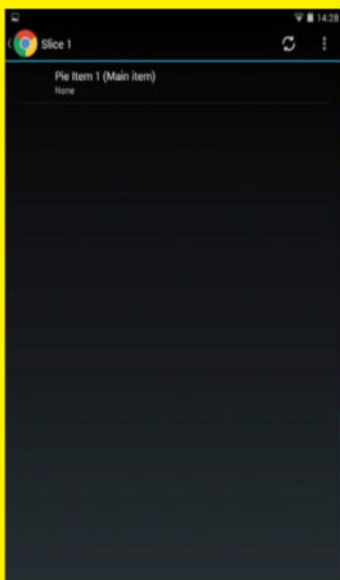
**3 Find your module**  
Now you need to find the module in the Installer. From the main menu look for the entry marked Modules. Now tap on that and you should be shown a list of all the Xposed Framework modules that you've got installed on your phone or tablet.



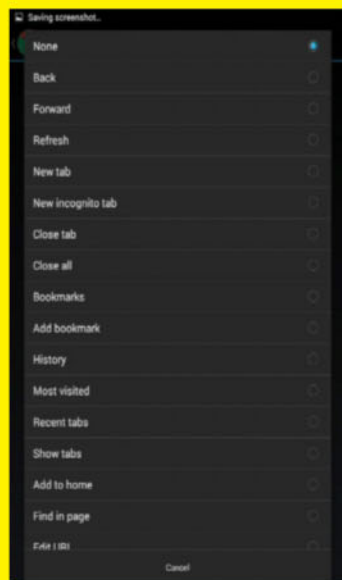
**4 Check the relevant box**  
If you've only got the one module installed it should be pretty easy to find. You should see a check box next to the ChromePie module. Tap on this and the module will activate. You'll have to restart your device for the changes to take effect though.



**5 After the reboot finishes**  
When you've rebooted your device head to your Apps list. The ChromePie app has exactly the same logo as your Chrome browser, and it's likely to be right next to it in the list. Find it, then tap on it to start setting up the controls you're going to use.



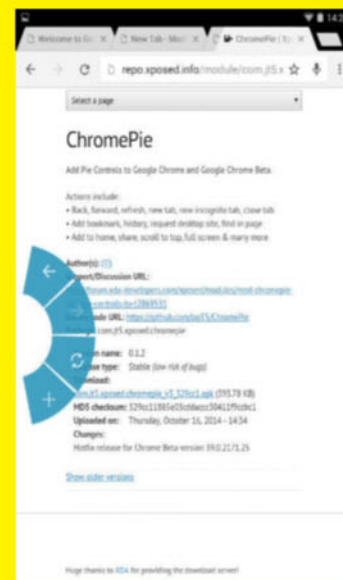
**7 Add a new slice**  
Now you want to tap on the option that says Add new slice. Here we're going to modify the controls that pop up when you slide a finger in from the left or right of your phone screen. It's pretty straightforward, and you can add plenty. Experiment to find the right balance.



**8 New controls please!**  
There's only one item in your pie at the moment, but we're going to add a few more in a matter of seconds. Tap on it and you'll bring up a list of options that you can add. Select one from the available list and then it should be added to the first slice.



**9 Add some more slices**  
Follow those steps for each new slice to add all the controls you need to your new pie. When you're done you should have a list that looks a little bit like the screen above. You don't want to make your pie too crowded, so keep the controls to a sensible amount.



**10 Just restart Chrome**  
Finally you'll want to tap where it says Restart Chrome. This will add your changes to the ChromePie. Slide a finger in from the left or right of the screen and a ring of options should appear around it. Swipe through one of them to select it, simple as that.

Works with >> Varies with device Difficulty >> Advanced

# Create your own app icon pack

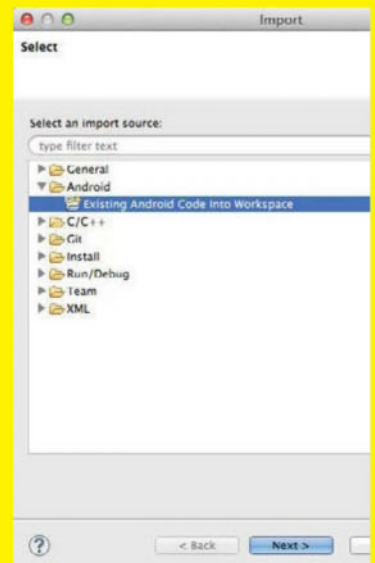
Build your own custom app icon pack, using Eclipse and the ADT plug-in



When it comes to customising your Android device's look and feel, launchers like Apex and Nova are a quick and easy option. You can even replace the default app icons with new graphics, by using your launcher alongside additional app icon packs. When you select a new app icon, this graphic represents the app in both the app drawer, and on the homescreen.

While there's no shortage of icon packs already available, if you want to truly customise your device, then why not create your own? You can create icon packs entirely from your own graphics, or you can modify the default icons. You could even find icon packs designed by other developers, and then use these graphics as the starting point for your own pack – however, if you're planning on distributing your work, make sure you have the original developer's permission to do so!

This tutorial shows you how to create your own app icon pack, which can be used with Nova Launcher. You'll need Nova Launcher installed on your device, and on your computer you'll need to have the Android SDK, plus the Eclipse IDE with the ADT plug-in. You can download this trio of software in one handy bundle from <http://developer.android.com/sdk/index.html>. Finally, you'll need the set of graphics you want to use in your pack.



## 1 Get sample pack

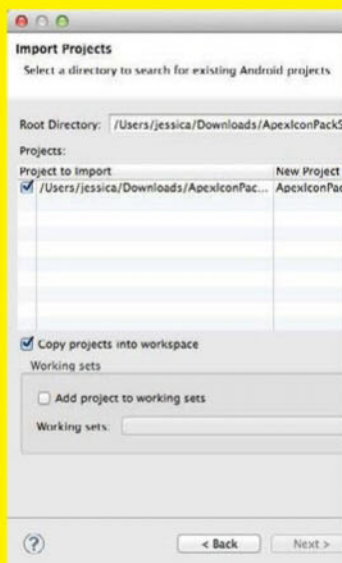
Go to <http://forum.xda-developers.com/showthread.php?t=1649891>. Even though you're designing icons to use with Nova, download the Apex Icon Pack Sample. Unzip the pack and launch Eclipse. Open Eclipse's File menu and select Import. Double-click the Android folder, select Existing Android Code and click Next.



## 6 Add info

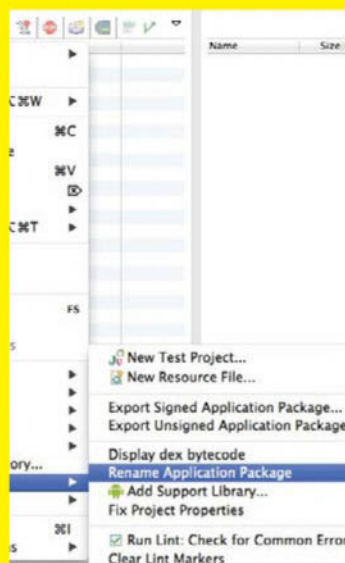
Open `/res/xml/appfilter.xml` and `/res/values/iconpack.xml`. You'll need to add all your icons to both files, using the image's filename and the app's ComponentInfo, for example `<item component="ComponentInfo{com.facebook.katana.LoginActivity}" drawable="facebook" />`.





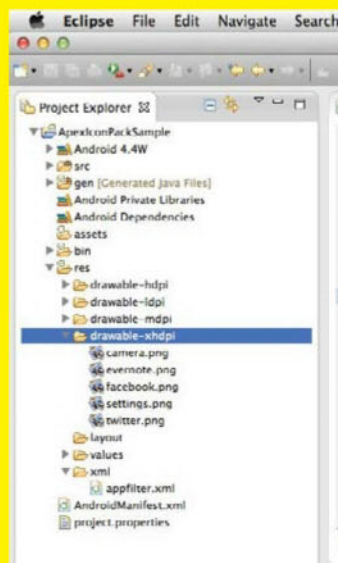
## 2 Import

Click the Browse button and navigate to your unzipped sample pack. Select the folder and click Open. Ensure the 'Copy projects into workspace' checkbox is selected, then click Finish. The ApexIcon package will appear in Eclipse's Package Explorer. The next step is renaming your project's application package.



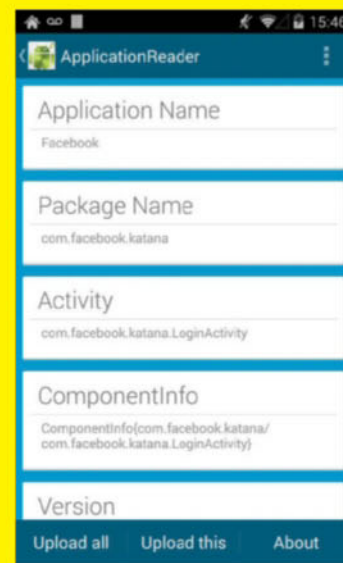
## 3 Rename app package

Control-click your project in Package Explorer, then select Android Tools and Rename Application Package. Rename your project and click OK. When Eclipse prompts you to rename other parts of your project, click OK. Open /res/values/strings.xml and change the information in this file to better reflect your project.



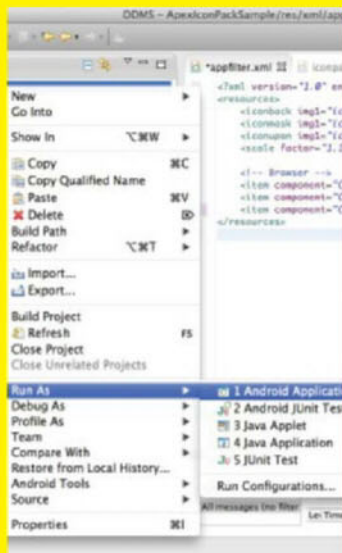
## 4 Add your icons

The res folder contains multiple drawable folders, corresponding to different dpi resolutions (dots per inch). You only need to drop your icon images onto one folder, but their dpi must be appropriate for that folder. For information on each folder's dpi, see <http://developer.android.com/design/style/iconography.html>.



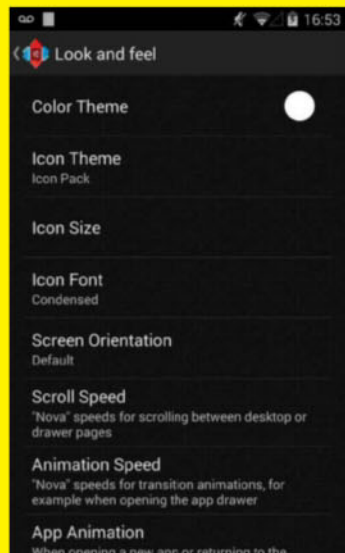
## 5 Download ApplicationReader

For the next step, you'll need to know the ComponentInfo for each app you're creating a custom icon for. One way is to download ApplicationReader to your device (free from the Play store). Use ApplicationReader to scan all the apps on your device and make a note of their ComponentInfo.



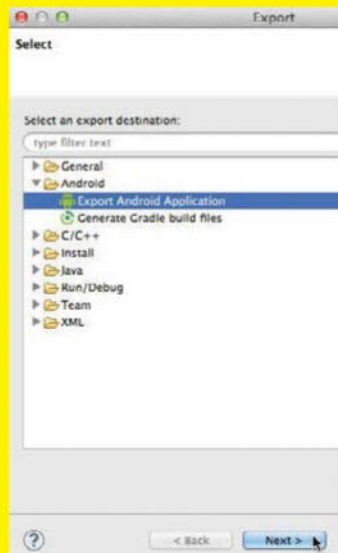
## 7 Test your app

It's time to test your app on your device. Attach your device to your computer using the USB cable. Control-click your project in the Package Explorer and select Run As followed by Android application. After a few seconds, you'll see a message confirming that your APK has been successfully installed.



## 8 Applying your icons

Ensure Nova is your default launcher. Then, launch Nova Settings and select Look and feel, followed by Icon Theme. Select your icon pack from the pop-up. In the next step, you'll learn how to share your icon pack with others, by exporting it from Eclipse as an Android app.



## 9 Create Keystore

Open Eclipse's File menu and select Export. Double-click the Android folder and select Export Android Application. Click Next. Select your project and click Next. Choose Create New Keystore and choose the location where you want to create your keystore. Create a password and click Next.



## 10 Export Android application

Complete the form, and specify that your keystore should be valid for at least 25 years. Click Next, and tell Eclipse where it should create your .APK file. Finally, click Finish and Eclipse will export your project as an Android application, ready for you to distribute.

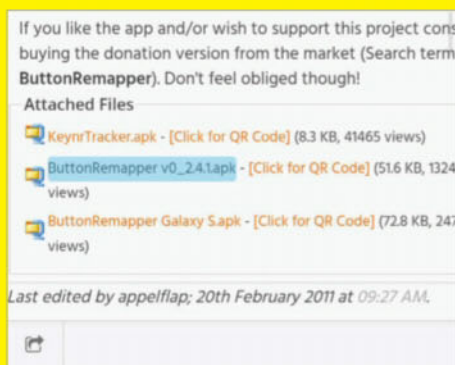
# Customise your device's physical buttons

Assign new actions to your device's physical buttons using ButtonRemapper

**R**ooting gives you the freedom to customise many parts of your device you wouldn't normally have access to. However, one thing you can't change are your device's physical characteristics, including its buttons. Since you can't change the buttons themselves, your only option is to change the actions these buttons perform when pressed. ButtonRemapper is an app that lets you do exactly this. According to the developer, ButtonRemapper

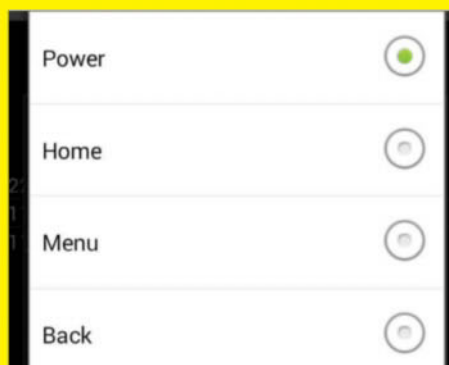
works on all devices, although if you own a Samsung Galaxy S you'll need to download the version of ButtonRemapper that's designed specifically for Samsung Galaxy devices. You'll also need a file explorer, such as ES Explorer, and have 'Unknown Sources' enabled on your device.

Once you've learned how to remap your device's physical buttons, this tutorial also shows you how to customise your device's soft keys, using SoftKeyZ.



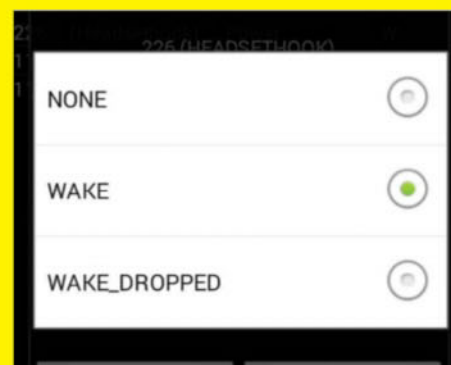
## 1 Install ButtonRemapper

Go to [forum.xda-developers.com/showthread.php?t=850464](http://forum.xda-developers.com/showthread.php?t=850464) and download the ButtonRemapper apk. Once it's downloaded, launch ES File Explorer and navigate to your device's Download folder. Tap the ButtonRemapper apk, and then select Install.



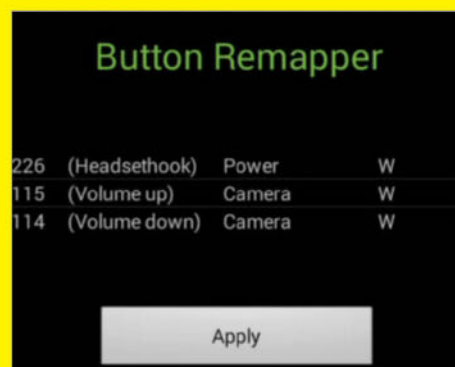
## 2 Remap your buttons

ButtonRemapper lists all the physical buttons on your particular Android device. To change which action a button performs, tap it and then open the 'Action' menu. Swipe through the available actions until you find one you want to use, and then give it a tap.



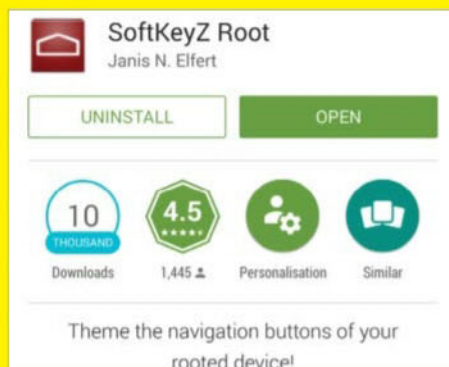
## 3 Assign action

You can also choose how the physical button impacts your device when asleep. Tap State, then choose whether pressing the button will wake your device and perform its assigned action (Wake), or whether it'll wake without performing the assigned action (Wake\_Dropped).



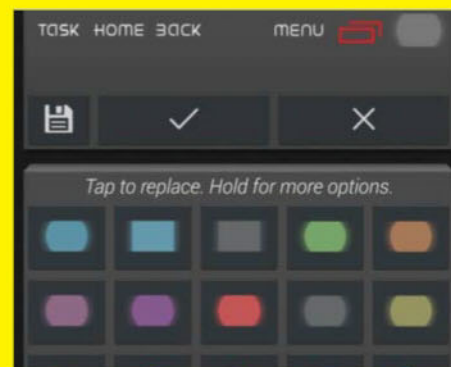
## 4 Save changes

When you're happy with the button's Action and State, tap OK. For ButtonRemapper's changes to come into effect, you need to reboot your device. Either reboot your device from inside ButtonRemapper by tapping Apply, or reboot your device normally.



## 5 Customise soft keys

Although ButtonRemapper only lets you remap your physical buttons, you can customise the soft keys by downloading the SoftKeyZ (£1.69/\$1.99) app from Google Play. Launch SoftKeyZ, grant it super user permissions, and read the information on the introduction screen.



## 6 Using SoftKeyZ

You can replace any soft keys with SoftKeyZ's alternatives. Simply tap any of the alternatives and SoftKeyZ will replace the corresponding soft key. When you're happy, make the changes permanent by tapping the tick button, which restarts your device.



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## 123D Catch

Turn everyday objects into digital 3D models



**You don't need to be a talented graphic artist or own a fancy 3D scanner in order to**

**create digital 3D models.** Released by top CAD software company Autodesk, 123D Catch enables you to do so by simply taking lots of photos of any object, or even a building, from various angles. The shots are then magically transformed into a rendered 3D model, with no manual stitching required. The Catch software has been around for Windows PCs and iOS devices for some time and is now finally available for Android.

Upon opening the app, you're greeted by a panel showing other users' 3D creations – and very

impressive many of them are too. Statues seem to work particularly well, while other creations included flowers, buildings and even Tom Cruise's head! Tap an item to rotate and explore the rendered surface.

There's every incentive to start creating your own models, but an unorthodox and confusing interface doesn't make it easy to find the options. We eventually discovered a right-hand panel (in addition to the left menu) with an option to start capturing an object. Upon first use, the app gives a few tips for best results, such as avoiding reflective surfaces and ensuring even lighting. It advises taking 20-40 photos from various angles and heights –

depending on your device, there may also be an on-screen circular indicator to guide you through the process. A Google Photo Sphere-style automatic shot-taking system would be even better, though.

Once done, you can review thumbnails and opt to retake shots before uploading them. All the

nitty-gritty is done in the cloud rather than on your device, which makes sense and frees you up to do another capture. However, it's not very transparent what's going on and, in our experience, it can take anything from 20 minutes to several hours. That's if it works at all, as we had a few abortive attempts at first. However, it's all worthwhile when finally you see your 3D model. Our wooden blocks turned out really well. While there's no in-app option to manually edit models and correct flaws, you can access them from the website – once you've created an account – and edit them in the web app or other 3D modelling software such as MeshMixer. You could even use the model with a 3D printer.

Your free account gives you unlimited cloud space and enables you to download up to ten premium models per month. Premium membership (£5.94 per month) lets you download unlimited premium models for commercial use and create 2D layouts of them. Either way, there is a strong social aspect to the service. Models may be liked, commented on, tagged and shared, and their creators followed.

While the app isn't the easiest to use, the results are very impressive, so it's well worth persevering.

**2 hour wonder**

Want your money back? You've got 2 hours to decide!



**» 0-40 minutes** Other users' 3D models look absolutely amazing



**» 40-80 minutes** We're busy taking photos from different angles



**» 80-120 minutes** It's taking a long time to process them

**keep** **refund**

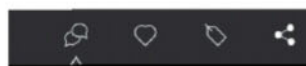


Browse other users' 3D creations and you'll be impressed

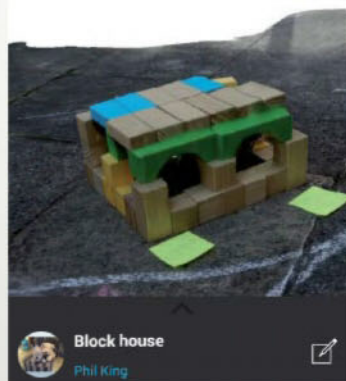


Etruscan head  
Valerio Rizzo

Ancient Etruscan head sculpture

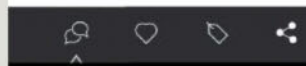


You can zoom and rotate each model to examine it from any angle



Block house  
Phil King

House built with wooden toy blocks



Our wooden block house turned out near perfect; we used sticky notes as reference points

### » specification

#### Price **Freemium**

**Designed for:** Phone

**Requires Android:** 4.0.3

### » verdict

**Performance**

**Design**

**Value**

**Not the easiest app to use, but it produces some amazing results**



**» best free alternative**



**SPACEDRAW** » Fancy drawing your own 3D models? Try out this fully featured modelling app



# WhoSampled

A world of sample-based music discovery



Ever recognised a sample used in a song, but can't figure out where it's from?

WhoSampled can provide the answer. Billed as 'the music DNA discovery app', it will scan your music library and tell you what samples each song contains and/or which tracks have sampled it, along with any covers or remixes. One limitation is that the app can only scan tracks stored locally on your device and not yet via Google Music or Spotify etc. Fortunately, you can also search for artists and tracks not in your library and browse a variety of charts – such as latest additions, most influential and most connected.

» like this? try this!

**SonarFlow Visual Music Player**

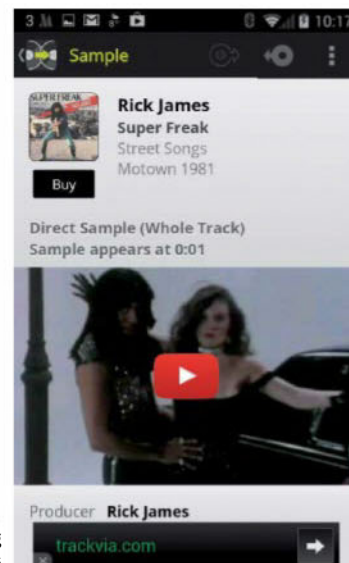
Explore music via a word-cloud-style interface

The results are well structured for easy exploration. Each artist page includes groups and/or member solo projects, plus a list of tracks as both an artist and producer. For instance, look up Kraftwerk, tap Tracks, then 'Trans-Europe Express' and you'll discover it's been sampled in 58 tracks; tap on one in the list, such as Afrika Bambaataa's 'Planet Rock', and you can play the YouTube video and compare it to the original song by swiping. Helpfully, WhoSampled tells you at which point the sample appears in both tracks.

As well as being useful for identifying those sampled hooks and beats, the app can lead you on a fascinating journey of musical discovery. Tapping on 'Planet Rock' reveals that it contains three other samples and has itself been sampled in 281 tracks, including

Compare YouTube videos of the sampling and sampled tracks

Lana Del Rey's 'Off to the Races'. In the latter case, however, the full track isn't available so you have to make do with an audio excerpt. Sadly, this issue



See what each track was sampled in and which samples it used

occurs fairly often while browsing and there's also the occasional fullscreen advert (since, unlike the iOS version, the Android app is free). Even so, the overall experience is still very good and you may soon become hooked.

» specification

**Price Free**

**Designed for:** Phone

**Requires Android:** 2.3

» verdict

A polished music discovery app with a unique angle



## Treehouse

Learn to code your own apps and more



This portal for online learning offers a wide range of courses on coding and developing mobile apps, plus web design and development. Unlike services such as Udacity, it requires a subscription – a 14-day free trial is available, but you'll need to cancel in time to avoid payment. It's fairly expensive (\$25 or \$49 per month, for Basic or Pro), but may well be worth it for those serious about learning new skills for a career in technology. Treehouse offers a vast library of over 1,000 videos presented by experts, complete with handy links and transcripts. Courses are divided into stages and steps, including Code Challenges and quizzes to practise/test what you've learnt. One advantage over the iOS app is the inclusion of Android courses (along with iOS ones), although disappointingly it lacks that version's facility to download videos for offline use.

» Price Freemium

» Designed for Tablet & Phone

» Requires Android 4.0.3

Each video module features related links and a full transcript



» like this? try this!

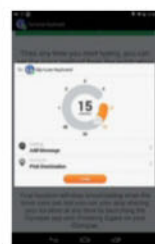
**UDACITY** » Not such a wide selection of coding courses, but it's free so a good starting point

## Glympse Keyboard

Share your location from any app



The main Glympse app is a popular way to share your GPS location with friends, and you'll need it installed to use this Keyboard. An ingenious idea, it lets you quickly share your location from within any other app, such as email or messaging. Just tap the keyboard input method notification and select



» Price Free

» Designed for Tablet & Phone

» Requires Android 3.0



## HomeTube

Safe YouTube viewing for youngsters



This replacement Android launcher is designed to offer a safe, ring-fenced YouTube environment for young users. Categories such as 'Peppa Pig' are based on search terms and offer a selection of 12 videos each.

An in-app purchase allows you to add and delete categories, but there's no control over individual videos. Since there's no guarantee that all content



is age appropriate, parents need to remain vigilant. HomeTube is a nice idea, but an option to create custom playlists of suitable videos would be better.

» Price Freemium

» Designed for Tablet & Phone

» Requires Android 4.0.3



## BASE Music Sensor

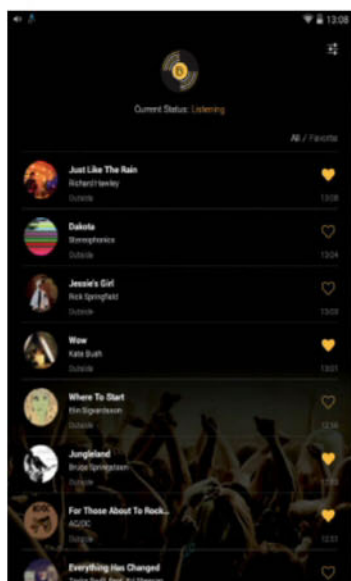
Constantly listening out for music to identify



Apps such as SoundHound and Shazam are great for identifying the music you

hear. However, it can be a chore having to get out your phone and fire up the app, in which time the song may have finished – particularly if it's a short excerpt on a TV show or advert. BASE Music Sensor aims to solve this problem by listening continuously in the background, compiling a list of the tunes heard throughout each day. Songs can be favoured and tapping one takes you to related videos on YouTube, if available. It can even wake your device to show a song ID notification bubble.

In our tests it proved a bit hit and miss, however, with some songs not identified. Results are far from instant, too, and it can take a little while for them to appear. While battery drain could be an issue, the developer is working on improving energy-efficiency. It's also nice that there are options to toggle listening on/off for a variety of detected situations, such as home, workplace, outside and actions such as driving, running, walking and cycling.



Tap on one of the songs the app identifies throughout the day to view it on YouTube

- » Price Free
- » Designed for Tablet & Phone
- » Requires Android 4.0



## Snowball Beta

A unified inbox for all your social messages



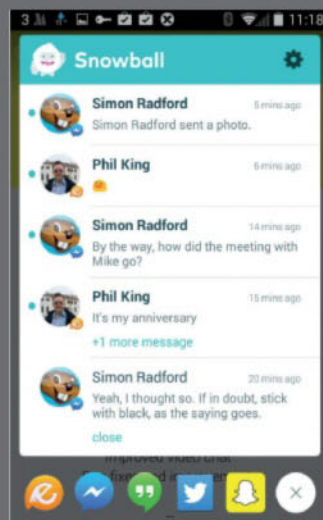
Once upon a time mobile communication was simple: there was just email and SMS texting. Nowadays, the field is fragmented into countless messaging apps with various unique selling points. While this is great for user choice, it's not so good for keeping track of conversations with friends who between them may well use a

variety of apps to contact you. So the idea of a unified inbox for all of these services is very appealing.

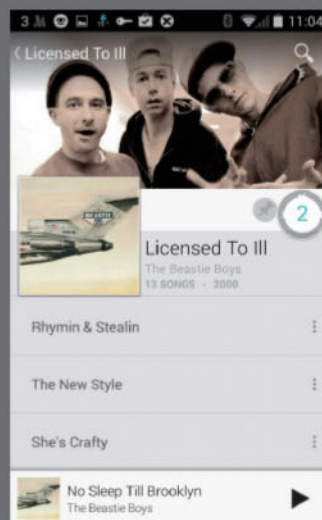
An Android exclusive, Snowball takes an interesting approach to solving the problem: rather than acting as a replacement messaging app, it gathers the messages from the other apps you use and organises them in one place for you to view. Indeed, you can quickly access your unified inbox from

anywhere in the Android ecosystem with a single tap of Snowball's on-screen floating bubble.

So far, Snowball supports Facebook Messenger, WhatsApp, Snapchat, SMS, Google Hangouts, Twitter, Line, WeChat and Slack, with more apps promised soon. It works by gathering notifications (once given access in Settings) for the other messaging apps and placing them into that floating bubble. While this is



See messages from different apps in a single inbox



Tap the floating bubble from anywhere to see your messages



Swipe between new messages on the lockscreen, too

## Horizon

Avoid vertical video syndrome!



Is there anything more annoying on social media than vertical videos? Well


yes, to be honest, but they're still a bit rubbish. Horizon will ensure you avoid this modern faux pas by using your phone's gyroscope to auto-level your videos as you shoot. So it doesn't matter how you hold your device, the recorded footage remains horizontal. It really does work like magic, too, adjusting the highlighted frame

No matter how you tilt the device, the frame stays horizontal

automatically as you tilt the device. It's a great way of stabilising the camera view when shooting something in motion, resulting in smoother, more watchable footage. You also have a choice of three shooting modes: for a flexible frame size, fixed frame size and no tilt correction (just full orientation). While the free app limits you to 15-second videos watermarked with the Horizon logo, an in-app purchase (£0.61/\$0.99) removes these restrictions.

- » Price Free
- » Designed for Tablet & Phone
- » Requires Android Varies



» like this?  **HORICAM** » A similar app that auto-aligns both videos and photos as you shoot



great for being able to view incoming messages, one drawback is that you can't reply from the Snowball screen itself – instead, tapping the message launches the relevant app; or you can tap one of five app shortcut icons at the bottom. Nor does it show your own responses in Snowball, so there's no conversation thread to follow. Another issue is that while Snowball shows emoji, it won't display photos nor Facebook stickers – again, you have to switch to the relevant app to view them.

So Snowball does have some major limitations, but still offers a convenient way of viewing all your incoming messages in one place – including on the lockscreen – and then tapping to quickly respond to them from the relevant app.

### » specification

**Price** Free

**Designed for:** Phone

**Requires Android:** Varies

### » verdict

**Performance** 

**Design** 

**Value** 

It's a handy unified inbox, but it has some major limitations



### 2 hour wonder

Want your money back?  
You've got 15 mins to decide!



**» 0-40 minutes** The bubble is handy for viewing all incoming messages



**» 40-80 minutes** You can only respond by switching to the relevant app



**» 80-120 minutes** Snowball doesn't display photos or art stickers

**keep** **refund**

### » like this? try this!



**Disa**

Currently in alpha testing, Disa promises to be a messaging hub for multiple services

## quickhits

### 5 top apps for... Editing photos



**Facetune**

**£1.99/\$2.99**

Nothing beats Facetune for touching up portrait shots. Its range of advanced tools make airbrushing easy, enabling you to remove blemishes, brighten smiles and even reshape facial features with a simple swipe. In short, it can make anyone look good.



### Snapseed



**Free**

Snapseed's selective adjustment facility lets you apply edits to just a small area of the image. A host of tools and effects include tilt-shift, retro scratches and an amazing HDR Scape filter.



### Pixlr Express Free



While lacking Snapseed's selective adjustment, this powerful all-in-one editor lets you get creative with over 600 effects, including some arty collage options. Great fun to play around with.



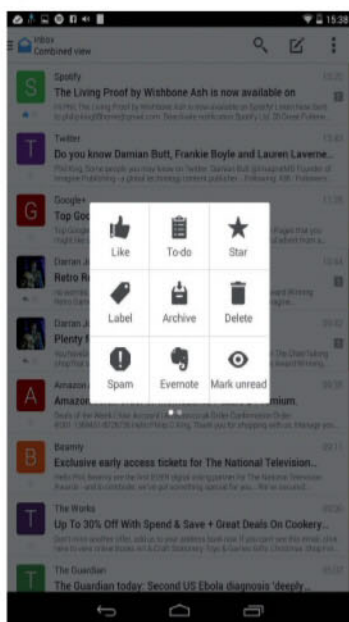
**Afterlight £0.59/\$0.99**

Its extensive range of tweaks and effects can be strength-adjusted using sliders. The filters are nice, though it sadly lacks the iOS version's Fusion facility to combine them to create your own.



**Repix Freemium**

Repix's unique editing approach sees you using brushes to paint effects onto the image in real-time. An IAP is required to unlock all the tools, but it's well worth a try for artistic types.



## Boxer – Free Email App

Email client with built-in to-do list



**Boxer's gesture-based interface enables you to quickly swipe away**

**unwanted messages.** By default, swiping left reveals standard archive and delete options; swiping right reveals a grid of actions, including spam, star, label (it supports Gmail labels), Evernote and to-do. The last of these enables you to set a due date for the task, along with a priority level and optional assignee. You can access all your to-dos from an option in the left menu. It's an interesting twist that could prove very useful for

work purposes, along with Exchange support. While the free app only supports one account, upgrading to Pro – pay £6.05/\$9.99 or invite five friends – enables multiple accounts (with a combined view option), plus custom quick replies and signatures. Also, unlike some third-party clients, it allows you to send locally stored (as well as cloud) attachments.

**» Price** Freemium  
**» Designed for** Tablet and phone  
**» Requires Android** 4.0.3



**» like this? try this!**



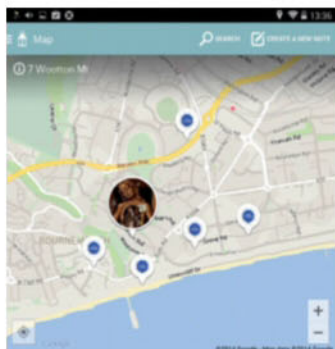
**ACOMPLI** This gesture-based email client features a focused inbox and built-in calendar

## Findery

Because every place has a story



This crowdsourced travel guide helps users to discover places and their history via virtual notes left on an interactive map. You're not limited to looking nearby – you can search for anywhere in the world, although by default it comes up with North American towns for place names.



It's also a tad laggy and the highlighted note bubble can often obscure others on the map. Once signed up, you can also contribute by leaving your own notes – public or private – which usually comprise text and a photo, but can also feature audio and video. In addition, it's possible to create 'notemaps', collections of notes about a particular place or topic. While Findery's content proves more engaging than the standard points of interest featured in most mapping apps, so far it's a bit sparse (apart from blue plaques) outside of major cities.

- » Price Free
- » Designed for Tablet & Phone
- » Requires Android 4.0



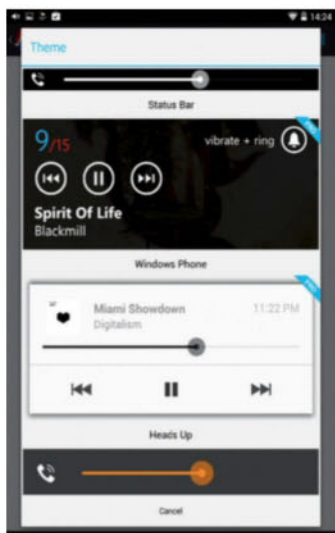
» like this? try this! **FIELD TRIP** » Google's app sends alerts about local points of interest, or browse via a map

## Noyze Volume Panel

Custom control via the volume buttons



Previously you'd have needed to root your device to gain the sort of custom controls offered by Noyze Volume Panel. As well as selecting from several preset themes, you can tweak the colour scheme and the number seconds the panel takes to disappear. Some themes include



music playback controls, while the most minimal is a slender bar that stays well out of the way at the top of the screen. Handily, you can also assign long presses of the volume keys to launch a certain app or shortcut. Another nice touch is the option to disable Noyze when using a camera app with a volume-key-activated shutter. Upgrading to Pro (£0.99/\$1.58) unlocks extra themes and features such as media cloak (to hide the panel when playing videos and games) and the facility to lock the volume control to one type (alarm, music, ringer etc).

- » Price Freemium
- » Designed for Tablet & Phone
- » Requires Android Varies



» like this? try this! **QUICKCLICK** » Assign sequences of volume key clicks to apps, shortcuts and custom actions

## Camera51 - A smarter camera

### Manual selection

While the app detects objects and faces automatically, you can also manually select up to three items in the frame

Guiding you to better photo composition



Smartphone cameras and apps can help us to take better photos by automatically adjusting things like focus, exposure and contrast.

One aspect that hasn't been addressed until now, however, is shot composition – a key part of good photography. Camera51 changes all that. It's like having a photography expert with you at all times, guiding you to take the best shots – and videos – possible according to classic rules of composition. It works by analysing the camera view to detect objects, faces, shapes and lines in real-time to provide guidance on how to frame the shot: on-screen icons indicate where you should move your phone. You can also manually select up to three objects of interest for it to use as focus points. Since there are some complex calculations going on, the app is pretty processor-intensive and so best suited to high-end devices – on lower-powered ones it may well prove laggy.

### Framing guide

Here the app is telling us to move the camera left and down until the phone icon fits inside the frame icon – we'll then have the perfect shot

“It's like having a photography expert with you at all times”

### Get to know

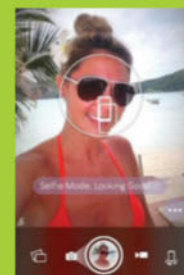
Learn how to compose your photos properly thanks to Camera51's helpful guidance and smart detection features



**In the frame**  
Camera51's on-screen guides show you how to frame your shot perfectly by moving the phone as directed. At times, it may also advise you to rotate the camera or step back.



**Face detection**  
The app is very good at detecting human faces, indicating them with a circle. If it detects more than one, it'll signify it's a group shot and alter its advice accordingly.



**Selfie mode**  
Tap the icon to switch to the front-facing camera and the app will help you to take the perfect selfie – including a group one if you're posing with friends.





### Extra controls

Bring up this secondary row of icons to access settings, turn on HDR (if available on your device), adjust contrast and toggle the flash

### Main controls

Tap the large middle button to take the shot. Via the icons here, you can also view the photo gallery and switch to video or the front-facing camera

### » specification

**Price Free**

**Designed for:** Phone

**Requires** Android 4.0

### » verdict

**Performance**

**Design**

**Value**

It works well on higher-end phones, helping you to compose better photos



### » like this? try this!

**Camera ZOOM FX Premium**  
Helpful features and a built-in photo editor



It takes some practice to get your linked music app to respond to BrainWave's pause/play hand gestures

# BrainWave (beta)

Control music without touching the screen

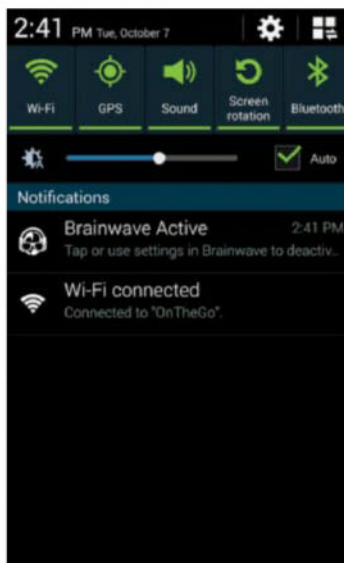


Ever pretended to be an orchestra conductor, waving your arms about to the music? BrainWave

puts us in mind of that as it enables you to control music playback using hand gestures detected via the front-facing camera. It already works with major music players including Google Play Music, Spotify and Pandora, which are automatically detected and can be launched from the app. One drawback

is that it only works effectively in landscape mode and with the device sitting on a flat surface – not practical in many circumstances. Nor does it work in the dark, although it doesn't matter if the screen is turned off.

Still, the process of controlling your music without touching the screen is fun and you can pretend you're a Jedi master! With your hand held 30-90cm (1-3 feet) from the screen, an open palm gesture is used to pause/play and a swipe left/right to skip to the previous/next song. It takes a little practice to get it responding accurately – particularly to pause/play, for which it only works with your right hand. Since you may well activate it accidentally at times, BrainWave can quickly be disabled by tapping its notification.



Brainwave's touchless controls can be turned off with a tap in the notification bar

### » specification

**Price Free**

**Designed for:** Tablet & Phone

**Requires** Android: 4.0.3

### » verdict

A bit unreliable and impractical, but it's fun to play around with



### » like this? try this!

**WAVE CONTROL** » Control both music and video playback with waves of your hand over the device



# head to head

Top apps face off to see which offers the best automation features

## YAHOO SPORTS VS SPORTS REPUBLIC

Sports news apps are more than popular than ever, with time spent using them more than tripling in the last year, according to Flurry analytics. Here's our play-by-play

of how two of the biggest hitters on Android compared

### » specification

Price **Free**

Designed for: Phone and tablet

Requires Android: 4.0



### » specification

Price **Free**

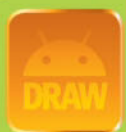
Designed for: Phone and tablet

Requires Android: 2.2

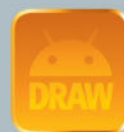
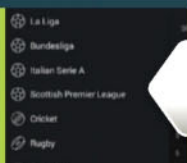
### Yahoo Sports

### Sports Republic

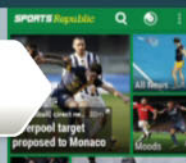
#### COVERAGE



Featuring soccer, cycling, baseball, basketball, cricket, martial arts and more, Yahoo Sports covers a broad range of sports with a mix of news, scores and league tables.



From the makers of News Republic, this app aggregates web stories covering football, rugby, tennis, motorsport, boxing, golf, athletics and more.



#### MULTIMEDIA



This app pulls in news stories from the Yahoo website. These are always detailed and interesting, but only take the form of written articles with no option for video.



Sports Republic has distinct sections for photo and video so you can easily filter out articles if you don't want to read. Photos can be viewed in a gallery or slideshow.



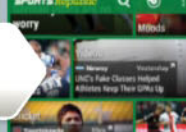
#### CUSTOMISATION



As well as switching between sports in a side menu, you can add teams you support to a favourites list for easy access. You can also track your Yahoo Fantasy Football team.



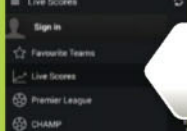
As you use the app and rate stories, it learns your interests. You can also customise your homepage by pinning topics and favouring certain sports.



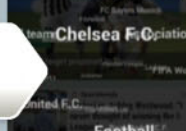
#### EASE OF USE



Tabs make it easy to quickly switch between scores, news and league tables, while a side menu makes it easy to switch sports. Very easy to use, especially one-handed.



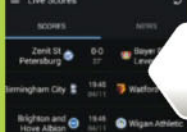
A feature called TagNav, which allows you to view a word cloud of phrases to quickly find stories you're interested in, is sadly more of a hindrance than a help.



#### SCORE KEEPING



A dedicated live scores section will keep you updated with the latest scores and news stories. You can also set up alerts for when goals are scored, to keep you fully up to date.



Pulling in content from a wide variety of sources helps Sports Republic stay up to date. However, it doesn't feature score or league tables, and its notifications are very limited.



And the winner is...  
**YAHOO SPORTS**

Sports Republic provides a steady stream of personalised news stories, while Yahoo Sports places greater emphasis on up-to-the-minute stats. Both these approaches have merit, but we favoured Yahoo Sports because it has a better alerts system and is easier to use on the go.



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## Asphalt Overdrive

Rev up for some Eighties-inspired arcade action

This spin-off from the Asphalt racing series is more of a simplistic arcade game that's clearly been designed for one-handed play – hence the use of portrait mode. The only control you have is swiping to switch highway lanes in order to avoid obstacles and side-swipe other vehicles for takedowns. The latter increase your nitro bar, activated by double-tapping, which proves handy for outrunning the cops in the main Getaway mode where you simply have to stay ahead



There are some fun classic vehicles to unlock, along with the usual supercars



Stunt ramp rolls can help you to stay ahead of the chasing cops

long enough to complete each stage. Other race modes add variety, including a fun Stunt Run where you can perform fancy rolls off ramps, and Destruction where you need to achieve a certain number of takedowns within a time limit. While steering is limited to lane switching, there are occasional forks in the track that are often worth taking to collect more nitros, plus cash and gold bars – the two currencies of the game. Up to three stars can be earned in each stage, according to your performance

– get enough stars in each five ‘Turf’ areas and you can take on the boss to unlock the next area.

Back at your base, you can visit the dealer to buy a new car and check out some classic vehicles including a Pontiac Firebird Trans-Am, Delorean DMC-12 and VW Camper Bus. Cash may also be spent upgrading your vehicle's speed, acceleration and nitro tank. So there's a decent strategic angle in spending your money wisely. There's also a social aspect in creating or joining a gang to compete in gang events, as well as solo leagues.

So far so fun, but two annoyances soon come to light. The freemium model sadly includes having to wait many minutes to recharge the energy units needed to race, as well as for delivery of some upgrades. In addition, the requirement for an internet connection hampers the pick-up-and-play nature of an otherwise well-structured and joyable arcade game.



Side-swipe vehicles to hit the takedown target in Destruction mode

» Price Freemium  
» Designed for Tablet & Phone  
» Requires Android 4.0



## what we've been playing

### Captain Fishblock £0.53/\$0.99

This fishy puzzler has us hooked! Not as easy as it sounds, it sees you dropping frozen fish blocks onto a rickety boat to stack them up without any falling into the water.



### Only Connect £1.99/\$2.99

TV's toughest quiz show is a favourite of ours and this mobile version is just as challenging. We get to practise the missing vowels round before taking on the connecting walls.



Recommend a game...

» twitter  
@lrobot



## Goat Simulator

For those who enjoy acting the goat



What started out as a joke prototype went on to become a huge viral hit on

the PC and now it's on Android. The main fun is in seeing just what your caprine character can do in the suburban sandbox environment, wreaking havoc by butting into objects, vehicles and people. This often reveals graphical glitches that add to the comical effect, as does the ability to lick things. One odd aspect is a lack of danger since the



The jetpack-equipped goat mutator is almost impossible to control

goat can never die – even after a long fall or being hit by a truck, a tap of the ragdoll button puts it back on its hooves. While the novelty does eventually wear thin, there is some genuine gameplay in attempting to complete a series of challenges. Extra spice is provided by switching

to ‘mutators’ with special abilities. There are also hidden areas and mini-games to discover.

» Price £2.99/\$4.99  
» Designed for Tablet & Phone  
» Requires Android 4.0.3





# The Walking Dead: Season Two

Not one for the (already) spineless



Telltale Games' zombie-filled story has been resurrected on Android for a second season. It'll even use your Season One save to continue the story based on your previous choices. As before, the post-apocalyptic adventure is divided into five episodes – while the first is free, the others cost £2.99/\$4.99 each. Best played with headphones, for maximum scare factor, it sees you touch-dragging the young Clementine to move her around the gloomy and sometimes gory scenes.

Interactive selection points are helpfully circled and tapping one results in an action or cut-scene. As previously, the game is a combination of decision-making



The action sequences involve following on-screen moves to evade enemies

and reaction/memory-testing action sequences. It's pretty grim stuff at times, but an involving and satisfying experience that will keep you coming back for more.

- » Price Freemium
- » Designed for Tablet & Phone
- » Requires Android 2.3.3



Elemental type advantage can help your monsters defeat the adventurers

## Welcome to the Dungeon

Play on the other side for a change



You play the part of the dungeon master, placing monsters in rooms to try to stop each trio of adventurers reaching the treasure. The battling

is largely automatic, with strategy limited to way you arrange your monsters to make best use of their type advantage. Earned gold and gems (also available via IAP) are spent on summoning new monsters, which can also be used to strengthen existing ones. A great deal of grinding is required to level up and unlock more dungeons, but battles are quick, the retro graphics and audio appealing, and it has that one-more-go factor.

- » Price Freemium
- » Designed for Tablet & Phone
- » Requires Android 2.3



## Impossible

It's not a real word, but it's a real challenge



While this endless runner/racer has an ultra-simple concept and design, it's far from easy.

Speeding automatically along an attractive neon-lit rollercoaster track, you steer left or right to avoid obstacles such as spikes and hoops. Since the track layout changes on each attempt, there's no way to memorise it, so it's a test of sheer reactions. Since fine control is key, the ability to switch between tilt and touch options is welcome, as is a sensitivity setting. Achievements are earned by surviving certain periods and you need to reach 60 seconds on each difficulty to unlock the next. A daily challenge provides an extra incentive to play, as do leaderboards. A nice bonus is the ability to video-record your attempts and share the footage.

- » Price £1.17/\$1.99
- » Designed for Tablet & Phone
- » Requires Android 4.0



Avoid obstacles to survive as long as you can on the rollercoaster course

## quickhits



### Star Wars: Commander Freemium

This real-time strategy game features all your favourite characters, locations and technology from the Star Wars universe. Build up and fortify your base, form alliances and train troops for epic battles.



### FIFA 15 Ultimate Team Freemium

EA's footy MMO focuses on building a dream team – by buying, trading or loaning. You can play matches yourself or just manage. FIFA 14's offline modes have sadly gone, though.



### Anomaly Defenders £2.89/\$4.99



It's another tower defence game, but the depth of the strategy is impressive as you unlock more items via a tech tree. The fast-paced action looks great and requires quick reactions.



### Unmechanical £1.99/\$2.99



This quirky but polished puzzle adventure sees you guiding a cute robo-helicopter around a subterranean 3D world, using just its magnetic beam to solve some clever conundrums. Fun and very atmospheric.



### Mage Gauntlet £1.11/\$1.99

Retro fans will get a dose of nostalgia from this SNES-style action RPG, plus a load of great gameplay. An in-depth spell-casting system adds greatly to the strategy of the fast-paced action.



### The Nightmare Cooperative £2.49/\$3.99



This puzzler-cross-rogue-like-roleplay game features a team of special-ability-wielding characters who all move together in unison. While easy to pick up and play, it soon becomes fiendishly difficult.



## Angry Birds Transformers

Optimus Prime has nothing on this lot



Any fans of the traditional bird-slinging

action you normally expect from an Angry Birds game should probably look elsewhere, as this one instead plays like a side-scrolling shooter.

The change is surprisingly good and the game plays well throughout. Each level contains different weapons to use and different pig-made constructions to shoot down. It can get a little repetitive from time to time, but the faithful homage to classic Transformers characters will provide a few giggles.

All this aside, Angry Birds Transformers takes the word freemium to the next level. The game



is near impossible to get through without dipping into your wallet, especially when certain levels require particular upgrades to get through. It's a poor business model and most will soon turn their attention to something else when they realise this issue.

» **Price** Freemium  
» **Designed for** Tablet & Phone  
» **Requires Android** 4.0



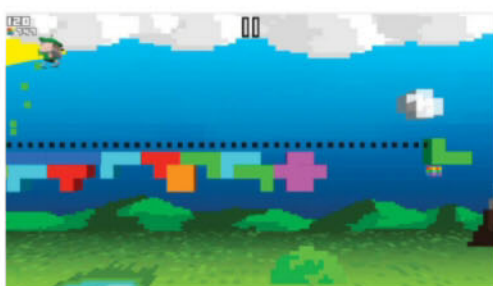
» **like this?** **try this!** **ANGRY BIRDS RIO** » Classic bird-throwing action set in the depths of a jungle is another Angry Birds game based on a popular movie

## Hazumino

A true pick-up-and-play title



Endless runners are in abundance on the Play Store, but none has previously combined that with the classic block-stocking gameplay that Hazumino offers.



Every level starts with you controlling a character in one of several retro-themed worlds, as you traverse obstacles to get to the end of each stage. Every so often, you'll need to save your character from falling into the abyss by constructing makeshift bridges out of blocks. Bridges have to be as level as possible, as each character has limited jump ability.

The high difficulty level kicks in fairly quickly and you'll be

attempting the same stage multiple times in order to get the correct configuration of blocks in place. There's not much longevity here, but Hazumino is a fun little game with ingenious gameplay and a killer chiptune soundtrack to boot.

» **Price** £1.09/\$1.99  
» **Designed for** Tablet & Phone  
» **Requires Android** 2.3



» **like this?** **try this!** **TEMPLE RUN 2** » This stunning sequel is a benchmark for all other endless runners to attempt to match

## South Park: Pinball

A crossover that seriously impresses



Believe it or not, South Park has been on our TVs for over 15 years, but this is one of the first officially licensed games that's seen the entire cast and crew hit Android screens. Pinball may not be everyone's cup of tea, but with the added bonus of South Park's comedic value, there's a lot to love here. Starting up the game reveals two different tables to play on – the first being South Park Super Sweet Pinball, while our personal favourite is Butters' Very Own Pinball Game.

Both include the traditional ramps, switches, toggles and bumpers you'd normally associate with a pinball table, as well as a series of objectives to complete. There's a whole host of one-liners and other gags littered throughout and any fan of the TV show will instantly recall many of the episodes referenced here. It could do with more tables, but this is still a whole lot of fun.

### Pause if necessary

The pause feature is really helpful if you need to temporarily stop the game

“There's a whole host of one-liners and other gags littered throughout”

### Get to know

Explore some of the additional features in South Park: Pinball



#### Butters' table

The adorable Butters has his very own table in the game and it's arguably the pick of the two available. Objectives are a little harder to unlock and complete, however.



#### Multiplayer

Up to four players can take in turns to compete against one another on either of the tables. You can even challenge your friends to beat your score via Facebook.



#### Play Games

South Park: Pinball is fully integrated with Google Play Games, meaning users can check leaderboards and unlock all available achievements.





### Keep score

You'll find that all the relevant scoring information appears on the LCD screen at the top of the table

### Find the objectives

Each table has a specific set of objectives you must complete to finish the table and score big

### Comedic value

Any fan of the show will undoubtedly have a few giggles at some of the one-liners the game throws at you

### » specification

Price **£2.99/\$3.99**

Designed for: Tablet & Phone

Requires Android 4.0



### » Best free alternative

**Pinball Pro**

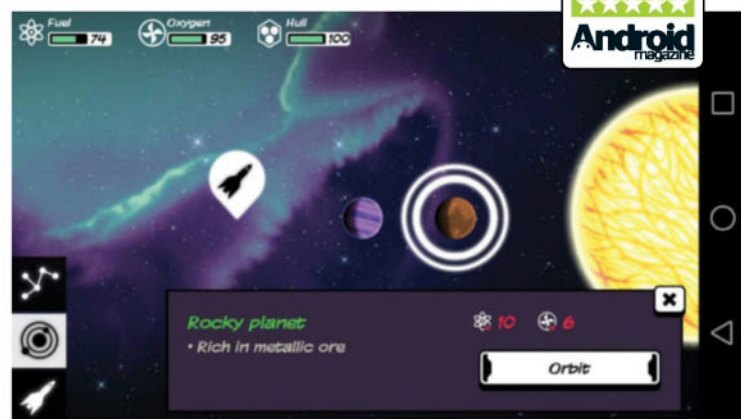
Not packed with features, but a good choice of available tables



Dig into a planet to discover precious resources you will need to survive in deep space

# Out There

Strategy gaming gets a space age makeover



Space exploration isn't something we're accustomed to seeing in

Android games, but *Out There* combines that with a good level of strategy to make it one of the must-have games of 2014. You start off with your ship, with the idea being that you need to find resources and upgrades for your vessel in the planets around you to survive. Sounds easy, right? Well not really, as one wrong move could see your resources wrongly used and your ship instantly shot out of space.

Along the way you'll encounter other ships, black holes and other objects that can cause damage to you. At every stage you need to think on your feet to scavenge for resources and that's ultimately what makes the game

so compelling to play. Once you die, which you will many times, you'll start all over again with another random generated world to explore.

There's so much to love about *Out There*. It's truly an original game, looks great and is ridiculously engaging to play. Sure, it won't be everyone's cup of tea, but this is one Android game well worth checking out if you want to try something different.

### » specification

Price **£2.49/\$3.99**

Designed for: Tablet & Phone

Requires Android: Varies



» like this? try this!



**REBUILD** » Build the world around you while defending yourself from constant zombie attacks



## HTC Nexus 9



Has HTC's first Google tablet since the Nexus One got what it takes to revolutionise large Android tablets?

**T**he Nexus 9 is Google's latest attempt to set a standard for what an Android tablet should be. A surprise to many, it has been manufactured for them by HTC rather than Asus (which produced the popular Nexus 7). HTC is critically acclaimed for its design, most recently for the full-metal HTC One (M8) smartphone. However, HTC has not produced a tablet for years and its previous attempt for Google, the Nexus One, while well received, didn't really represent a major sales success.

Perhaps this is why the Nexus 9 looks like a Nexus first and foremost. It shares its design language with the Nexus 5 and the Nexus 7 (2013), featuring a soft-touch back, large horizontal Nexus branding and a very plain front. The slim metal band around the outside of the Nexus 9 is a small nod to HTC's engineering abilities.

However, one HTC feature that we're very glad is included is the BoomSound stereo speakers. Both loud and high quality, the dual speakers offer a supremely immersive experience whether you're playing games or watching videos.

The Nexus 9's screen matches the Sony Xperia Z3's when on maximum brightness, which is certainly no mean feat. Also significant is its 4:3 aspect ratio, the same as the Apple iPad. A large number of Chinese tablets (including the Xiaomi MiPad) already do this, but the Nexus 9 is the first mainstream tablet to rival Apple head-on.

The Nexus 9 uses the Nvidia K1 64-bit mobile processor with its 192-core (yes, you read that right!) Kepler GPU. As you would expect, the device can handle anything you throw at it, including the most intensive, graphic-heavy games. In fact, when paired with a Bluetooth joypad, you end up with a very formidable mobile gaming platform. We did notice that when using the tablet it got quite warm when running the most demanding of games, but not hot enough to cause concern.

The Nexus 9 is the first device to launch with Android 5.0 Lollipop, the latest version of the OS. The most visible change in the new system is the new Material design language. From the moment you power on the Nexus 9, everything just looks that much better. The dark backgrounds and limited colours of Holo, which has been around since the release of Ice Cream Sandwich, have been replaced by vibrant, multilayer user interfaces that really pop on the gorgeous screen.

Apps run incredibly smoothly on the Nexus 9, as you'd expect given the powerful hardware,

### Hardware buttons

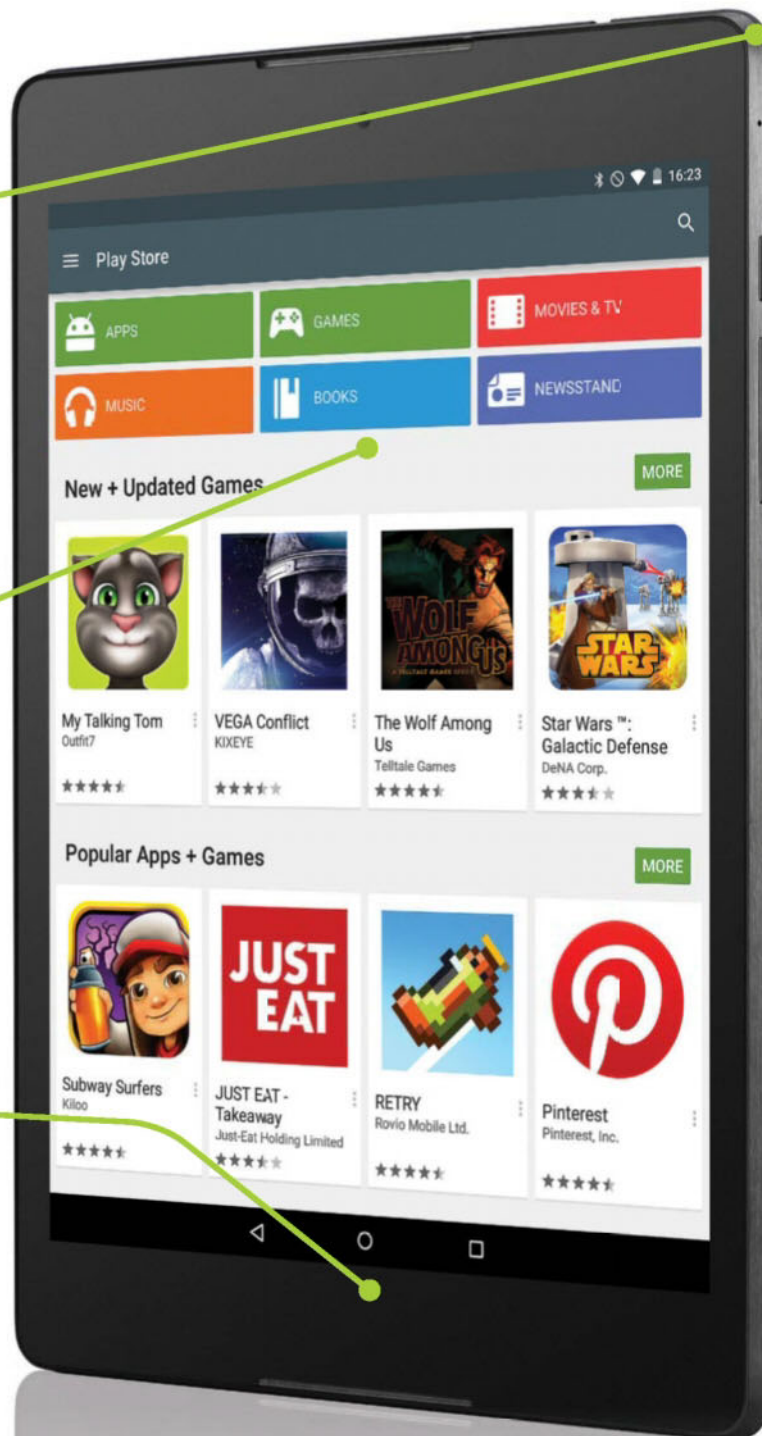
The Nexus 9 power and volume buttons are on the right-hand side of the device. You can double-tap the screen to turn it on, but there's no CM-like double tap to turn off the function

### Camera shy

The 16MP rear camera does capture reasonable detail in well-lit situations, but in more challenging conditions it can struggle to focus and accurately represent colours

### Now you're talking

Dual microphones enable noise cancelling on the Nexus 9 for voice calls via VOIP services like Skype. A Nexus 9 LTE variant is available, but it isn't able to make voice calls via your mobile network





## Wireless connectivity

The tablet supports 802.11 a/b/g/n/ac WiFi and reception is excellent. It also features Bluetooth 4.0, and NFC is used for improved AAndroid Beam functionality for transferring content just by touching devices together

## Keyboard folio

A Nexus 9 keyboard is sold separately for £110. It attaches magnetically to the tablet, but wraps around completely when not in use to keep your device safe. Connecting via Bluetooth, it has a battery life of up to 4 months

autofocus on the Nexus 9 is sluggish when compared to most Android phones nowadays. Meanwhile, the front-facing 1.6-megapixel camera is only suited to video calling.

The Nexus 9 certainly isn't a budget tablet, with a starting price of £319.99, but then it is a much more impressive device than the Nexus 7 it succeeds. For all uses other than watching movies, the 4:3 is a far more usable ratio and the 8.9-inch size makes the device easier to manage in the hand than other large Android tablets. A powerful processor, solid specs and excellent build quality make this the Android tablet to have. Our only reservation is that we would have preferred to see a little more HTC DNA in the device, but maybe a HTC Sense version will deliver that in the future, if the Nexus 9 is successful enough for HTC to overcome its fear of tablet failure.

# HTC Nexus 9 information

Price From £319.99

» More information  
[www.google.com/nexus/9/](http://www.google.com/nexus/9/)

» Supplied by HTC UK

## Battery life



The battery is smaller in the Nexus 9 than some of its peers, but battery life is still very good



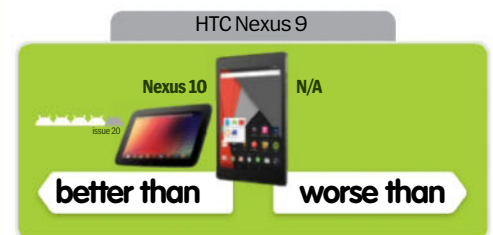
## technical specs

» Operating system.....	Android 5.0 Lollipop
» Processor.....	Nvidia K1 2.3GHz quad-core, 192-core Kepler GPU
» Memory.....	2GB
» Dimensions.....	153.68 x 228.25 x 7.95mm
» Weight.....	425g (Wi-Fi), 436g (LTE)
» Display size.....	8.9-inch
» Display resolution.....	2048 x 1536 pixels
» Expansion slot.....	n/a

and the new improved multitasking interface makes switching between them easier than ever. One of the biggest problems with large tablets on Android previously has been that with the limited number of tablet-optimised apps available, enlarged phone apps would just look ridiculous on a 10-inch screen. Perhaps it's that 4:3 ratio again, but it doesn't seem as much of a problem on the Nexus 9 – apps generally just look great.

If we were to looking for a barometer of the Nexus 9's success, then perhaps it would be that it, together with Material design, may finally encourage developers to update their apps to be more tablet friendly – a very important thing if large Android tablets are finally to achieve the success that they deserve.

The snapper on the Nexus 9 is best described as adequate. The 16-megapixel main camera does have a flash and captures reasonable detail in well-lit situations, but in more challenging conditions it can struggle to focus and accurately represent colours despite letting in a decent amount of light. The biggest problem with the camera, however, is the speed of capture –



## Performance

Not only does the device have high end specifications, Lollipop is well optimised too.

## Design

The design is classic Nexus minimalism, but it is starting to feel a little dated.

## Features

Guaranteed 64-bit aside, there's not a lot in the way of next-gen hardware. It's well specced though.

## Value for money

The Nexus 9 is fairly priced, but Nexus devices certainly aren't bargain basement any more.

## » Verdict

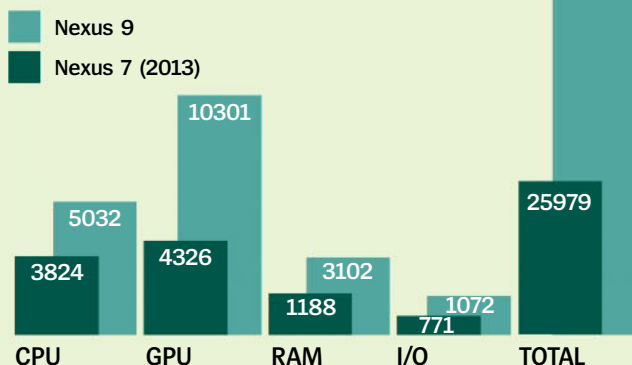
The Nexus 9 is the Android tablet to have today for most people. Heavy movie watchers might still prefer 16:10 ratio devices.



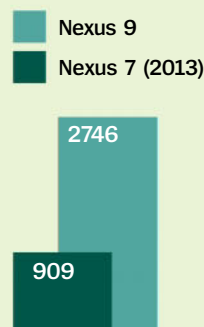
## Performance tests

You'd expect the Nexus 9 to be fast – and it is! The AnTuTu score is almost double that of the Nexus 7, with particularly impressive UX performance. Vellamo results were even better, with the Nexus 9 beating virtually all available hardware.

### AnTuTu



### Vellamo



## Dell Venue 8 information

Price **£129**

» More information  
[www.dell.com](http://www.dell.com)  
» Supplied by  
[www.dell.com](http://www.dell.com)

### Battery life



A mammoth 4550mAh battery will keep Dell's tablet running for a couple of days



### technical specs

- » Operating system.....**Android 4.4.4**
- » Processor.....**Intel Atom Z3480  
2.1GHz dual-core**
- » Memory.....**1GB RAM, 4GB storage**
- » Dimensions.....**130 x 216 x 8.95mm**
- » Weight.....**338g**
- » Display size.....**8-inch**
- » Display resolution.....**1200 x 1920 pixels**
- » Expansion slot.....**microSD**



### Performance

Blitzes through any task thanks to the Intel Atom Z3480 processor

### Design

A tried and tested design that's also boring and a bit too plain for our liking

### Features

Good selection of pre-installed apps available. Camera is distinctly average, however

### Value for money

Compared to the competition it's priced fairly well, but the Intel processor makes it a steal

## » Verdict

In terms of performance and usability, the Dell Venue 8 is one of the best budget tablets around

### Not a looker

The plain black aesthetic of the Dell Venue 8 has been tried and tested on hundreds of Android tablets. The main problem here being that there's little to differentiate it from the others on the market

### Power of Intel

You simply can't compete with the power of an Intel Atom chip within a tablet frame. It keeps absolutely everything feeling swift and it's not too detrimental to battery life either

### Monster battery life

On low to medium use you can expect to get a good few days of battery life out of the 4550mAh offering here. Watching movies and constant audio playback will drain this faster, however

### How much storage?

Although 16GB of storage is advertised, users can expect to get just over 10GB available to them. You'll need to take advantage of the microSD port to add to the internal storage



# Dell Venue 8

Can the revamped Venue 8 show that Dell has learnt from its previous tablet mistakes?

**Y**ou'd be hard pressed to find any noticeable aesthetic differences between the new Dell Venue 8 and its predecessor, but then again, it would be difficult to differentiate this from nearly any other tablet on the market. The bleak black 8-inch exterior has been tried and tested by nearly every Android manufacturer, but it's a safe bet which Dell knows potential users will like. Around the back there's a nice matte finish that makes the tablet feel good, but it's a little on the heavy side and fairly chunky as well. Turning on the device reveals a crisp 1920x1200 display that is both beautiful to look at and also highly responsive.

Although Dell hasn't included a custom skin, it isn't pure Android 4.4.4, and there are several signs that the tablet is business orientated. There are a number of work-related apps pre-installed, but sadly none of them can be uninstalled, which wouldn't be a problem if users got the 16GB of internal storage advertised. Instead there's only 10GB readily available. There's a microSD slot on the side of the device that works with cards up to 64GB, however. Another app Dell has decided to include is MaxxAudio; it's surprisingly good at perfecting the sound emitting from the small speaker located at the bottom of the device, but a

second speaker would have really helped it stand out. All of this sounds great, but you need a decent battery to keep it going. The mammoth 4550mAh battery does exactly that and will last you a couple of days on medium use.

Dell's history in laptop manufacturing means users can once again enjoy the power of the Intel Atom chip, in this case the Z3480, alongside 1GB of RAM. Although you might think it would be slower, due to the fact it's only a dual-core processor clocked at 2.1GHz, it's lightning quick. No matter what task you undertake on the Venue 8, the processor easily powers through it and it trumps nearly every budget tablet we've previously tested. The processing power also helps keep the default Camera app from experiencing any sort of lag, which we've become accustomed to with similarly priced tablets. Quality isn't the best from the 5-megapixel rear-facing offering and there's no flash included, but it isn't so bad for occasional use.

From what looks like a bland device on the outside, the Dell Venue 8 certainly surprises when turned on. A combination of the powerful Intel processor, a crisp display and a mammoth battery make it a solid, if not spectacular, choice for those on a strict budget.



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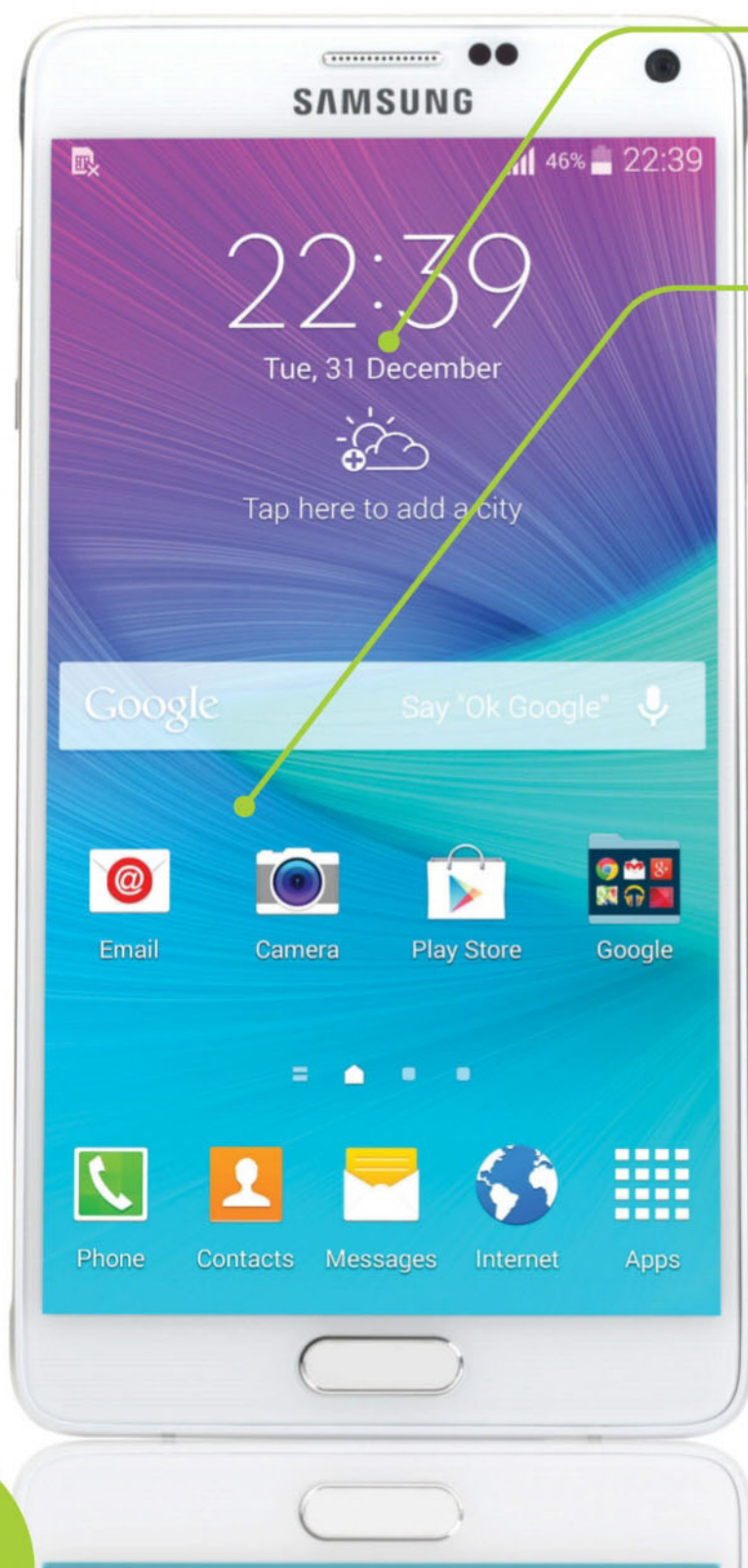
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# Samsung Galaxy Note 4

Samsung's latest phablet is an evolution, not a revolution like the earlier Note models



## TouchWiz isn't bad!

There are plenty of changes in TouchWiz, and while stock Android is still preferable, this is a noticeable improvement over some of the poor versions we've experienced before

## Stay in sync

What we love most about the suite of stock Samsung apps is that they all sync together so well. What could be improved, however, is the syncing process between Samsung and Google

Samsung carved out its very own niche in the market when it first launched the Galaxy Note series back in late 2011. Although numerous competitors have been released since, the Note still stands as the premier phone-cum-tablet hybrid, with the Note 4 being the latest edition. Compared to what we've seen in the older versions of the Note series, the Note 4's exterior is a noticeable upgrade. The use of premium materials, including a quality faux leather back and a ring of metal around the edges, leaves the Note 4 looking like one of the best Android devices we've ever had the pleasure of testing. This is without doubt a luxury product, targeted at the very highest end of the market. As well as giving the phablet a facelift, Samsung have also brought the Note bang up to date by adding this generation of device's must-have features: a removable battery and a microSD

slot. However, these updates are incremental, and beyond a cosmetic refresh, don't offer a lot more than the Note 3 did.

For instance, the quad-core

## No need to charge

For a device of this size, battery life is one of the most important aspects to consider. The 3220mAh offering here is efficient enough to keep you going for a couple of days with ease

## S Pen improvements

For all areas of multitasking on the Note 4, the S Pen proves itself to be a surprisingly helpful tool. It's great for moving files and folders around quickly and efficiently



good  
for...

## Multitasking

The TouchWiz interface makes it easier than ever to balance several tasks at once



processor is powerful enough to blast through anything you throw at it, but is not a major update on the Note 3 and no better than other flagship handsets. There's also the small matter of the S Pen, which remains pretty much the same, but it's easier to use at an angle and a wide range of shortcuts can now solely be accessed through using the stylus.

Significantly, in a world where phablets grow ever larger, the Note 4 has also kept the same 5.7-inch screen size as the Note 3. This is still a massive device to hold in one hand, however the Note 4's extra thin body makes the task a little easier. The screen itself is a noticeable improvement, however, and the bump to quad HD helps make everything seem vibrant. Colours especially look good here and both icons and lettering are as crisp and clear as we hoped for. For a device that specialises in multitasking, moving around the device is a real pleasure.

It's testament to Samsung's vision of being the best Android manufacturer out there that arguably the biggest change in the Note 4 is with its TouchWiz interface. All the usual S Pen-enabled apps have seen updates, while there are new side menus to quickly move between apps and screens. It's just a pleasure to use and although it's still not as simple as stock Android, the gap is gradually closing with every update.

The other major change is the 16-megapixel camera. This time around there's a helpful image stabilisation feature to help keep blur to an absolute minimum, while low-light photography is taken care of with the designated night mode. Images can sometimes look oversaturated, but it's still a big improvement over previous models.

To use all of this, you're going to want a battery that can keep up. The 3220mAh battery here is a behemoth and will undoubtedly keep you going for a couple of days before requiring a charge - no matter how much you use it. The

### Get expanding

If you soon eat up the 32GB of internal storage, no problem: there's the added benefit of a microSD slot that can be used with anything up to 128GB microSD cards



battery is also removable, but finding how to get into the back was slightly confusing at first.

Lets set the record straight: the Note 4 isn't as revolutionary as we've seen before and may even be a small disappointment to the most critical of Android users. But what it offers, however, is a small improvement in nearly area of the device. The design has been revamped to cater for Samsung's new premium aesthetics, TouchWiz is easier to use and the S Pen has finally come of age. If you are a long-standing fan of the Note series and have been waiting for an upgrade, there's no reason why this shouldn't be your next device. Note 3 users might not find quite enough reasons to move across, however.

### Metal influence

Samsung's new focus on premium finishes on its devices couldn't be more apparent here. The use of metal and faux leather helps to elevate the Note 4 to a whole new level of design



## Review

### Samsung Galaxy Note 4

## information

Price **£649.95**

» More information  
[www.samsung.com](http://www.samsung.com)

» Supplied by  
[www.samsung.com](http://www.samsung.com)

### Battery life



The gigantic 3220mAh battery will last a couple of days - even with high usage



### technical specs

- » Operating system..... **Android 4.4.4**
- » Processor..... **Snapdragon 805 2.7GHz quad-core**
- » Memory..... **32GB storage, 3GB RAM**
- » Dimensions..... **153.5 x 78.6 x 8.5mm**
- » Weight..... **176g**
- » Display size..... **5.7-inch**
- » Display resolution..... **1440 x 2560 pixels**
- » Connectivity..... **Bluetooth 4.1, Wi-Fi 802.11 a/b/g/n**
- » Expansion slot..... **microSD up to 128GB**

Samsung Galaxy Note 4



### Performance

No lag to note, thanks to the quad-core configuration used here

### Design

Premium materials used throughout alongside a sleek and sharp look

### Features

Both TouchWiz and the camera have been improved, but still not perfect

### Value for money

Expect the price to stay at the £600 mark well into the new year

## » Verdict

Small improvements help make this the most refined Note yet, but not as groundbreaking as the others

### S Pen

Small improvements have made the S Pen an essential tool in all areas of productivity

### Enjoying media

With a display as good as this, there's no way you won't enjoy watching movies on it

### Looking great

The sleek frame of the Note 4 is a joy to look at and also to hold

## Moto X (2014)

Can Motorola stake its claim as the premier Android manufacturer with the revamped Moto X?

### Metal frame

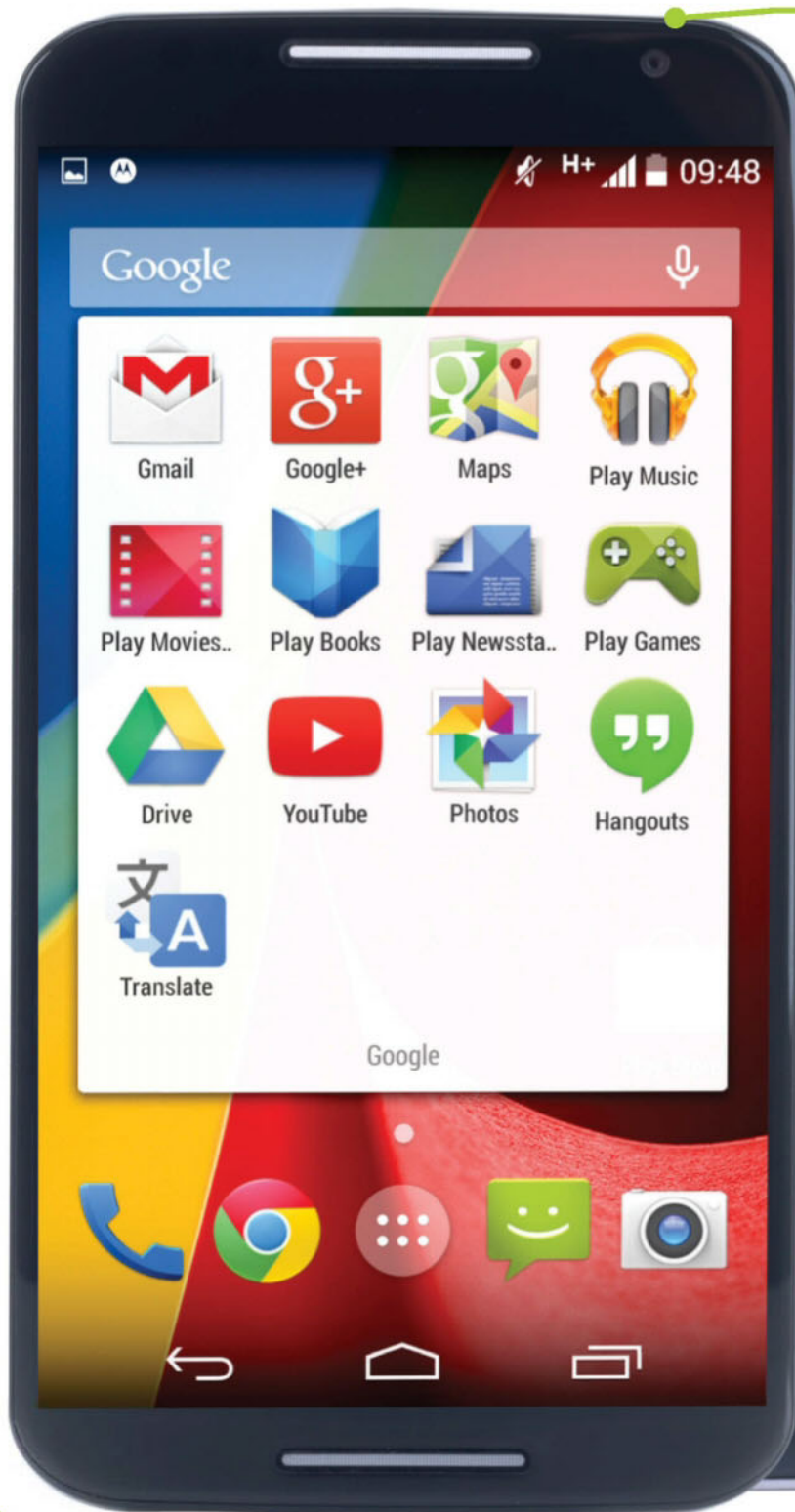
Adding metal frames to phones seems to be the current trend in most flagship devices. The Moto X is no different and while the design isn't as impressive as the Galaxy Alpha, it still has some nice touches to it

### Shooting conditions

Although the wealth of shooting options is impressive on the Moto X, the quality of photos in low light conditions isn't as impressive. You'll want to invest in a decent editing app to bring them up to scratch

**W**e loved the original Moto X. It outperformed the competition, had a nice design aesthetic and provided all the fundamental features that today's smartphone users require, proving to be one of the best devices of 2013. After garnering feedback, Motorola is back for another stab at the flagship pie with its second version of the Moto X.

This time around, Motorola has opted for a metal frame and a more noticeable curved back than its predecessor. A combination of the two offers a distinct premium feel to the device, while not being too heavy or awkward to hold for prolonged periods of time thanks to the overall thinness of the phone. The metal frame includes only a couple of distinct ports, with a 3.5mm jack and microUSB port placed at the top and bottom of the device respectively. Both the volume rocker and power button have a nice raised feel to them and have been finished with a rough pattern for extra grip. Around the back you'll find a large camera sensor and familiar Motorola branding. It's a device that won't really leave you gasping for air in amazement in the looks department, but it just looks and feels like a premium handset that should please all but the fussiest of Android users.



good  
for...

### Performance

The Snapdragon 801 processor blasts through all tasks without any fuss



We've always loved Motorola's intent on providing a stock Android experience and that trend continues here. Android 4.4.4 runs without any issues thanks to the Snapdragon 801 processor, but this time around there is a suite of surprisingly helpful Motorola apps. Migrate helps you transfer files when moving from iPhone to Android, Moto is an average voice search system, while the Help app is fairly self-explanatory. Via the Settings menu, users can also find Motorola Connect, a great service for viewing text messages on your desktop computer, as well as the Tap & Pay feature for those intrigued by wireless payments. Apart from that, the device is yours to fill with whatever you like. 16GB of internal storage is fairly standard and although the lack of an expandable memory facility is disappointing, cloud storage options are plentiful.

The upgraded 13-megapixel camera has one of the biggest sensors we've seen on the back of any Android phone previously. It's certainly an upgrade from the original Moto X and there's an array of shooting features readily available. Eagle-eyed users will find that video can be shot in 4K on this device, which is a nice choice to have, but the large files will soon eat up the internal storage. Quality of photos was decidedly mixed depending on the lighting

situation: whereas camera performance shines in the daylight, there aren't enough options to make shooting in the dark viable.

To enjoy your photos you're going to want a decent screen to view them on. Without doubt, the Moto X has one of, if not the best, screen we've seen on an Android device. At 5.2 inches and offering 424ppi pixel density, everything is crisp and clear. Colours look fantastic, which is something you'll soon notice with Motorola's choice of zany, albeit colourful, wallpapers. This, partnered with the processing power of the device, simply makes the Moto X an absolute pleasure to use, whatever you decide to do with it.

We've also had pleasing experiences with the battery life, often the downfall with many a high-end device. The 2300mAh battery is by no means a monster, but it will get through a day of medium use without too many issues.

There's no denying there are some niggling issues with the Moto X, mainly the lack of a microSD slot and poor camera quality in low light conditions. But the phone just screams premium wherever you look. It's a device that's been a long time coming from Motorola and, while it isn't perfect, this is without doubt a phone that every Android user should strongly consider for their next purchase.

### Beautiful display

We couldn't find a single fault with the 5.2-inch display on the Moto X during our time with the device. The way it displays colours is a particular highlight

### Android Lollipop

The Moto X will be one of the first devices to get the Android 5.0 update. Android 4.4.4 is still a superb OS to use in the meantime, however

### An easy transition

The inclusion of the Moto Migrate app is perfect for those moving from iPhone to Android. The app enables users to systematically move folders over to their new device without the need for any complicated third-party apps

### Shoot 4K video

The Moto X is one of the first Android devices to offer users the chance to record 4K video. Quality is absolutely phenomenal, but the files tend to be very large and will eat up your internal storage

# Review

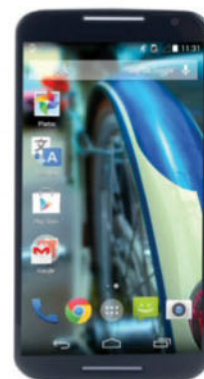
## Moto X (2014)

# information

### Price £408

» More information  
[www.motorola.com](http://www.motorola.com)

» Supplied by  
[www.clove.co.uk](http://www.clove.co.uk)



### Battery life



With a 2300mAh battery, the Moto X has enough juice to get you through a day of moderate use

### technical specs

» Operating system.....	<b>Android 4.4.4</b>
» Processor.....	<b>Snapdragon 801 2.5GHz quad-core</b>
» Memory.....	<b>2GB RAM, 16GB storage</b>
» Dimensions.....	<b>72.4 x 140.8 x 10mm</b>
» Weight.....	<b>144g</b>
» Display size.....	<b>5.2-inch</b>
» Display resolution.....	<b>1080 x 1920 pixels</b>
» Expansion slot.....	<b>N/A</b>

Moto X (2014)



### Performance

Blasts through anything you throw at it with absolute ease

### Design

Looks and feels like a premium device without any extras

### Features

The suite of Motorola apps is helpful, but camera could be better

### Value for money

Slightly cheaper than most other current flagship phones on the market

## » Verdict

A big and beautiful device aimed at new and seasoned Android users alike



### Design

The combination of curved back and metal frame makes for a beautiful package

### Migrating

Move from iOS to Android with the helpful Moto Migrate app

### 4K video

Shoot 4K videos and share them with friends and family with ease

# HP Chromebox

Run Android apps on one of the first next-gen Chrome OS computers

## Stylish design

The HP Chromebox is sleek and small, perfect to fit in small spaces when you don't have much room to spare. It also comes in a range of colours, including blue, white and grey

As Android users we're already fully embracing the online future, our data ever present on all our connected devices. This extends to the Chrome browser as well, with bookmarks and web history shared across desktop PC, laptop and smartphones if you have them set up properly.

The HP Chromebox, one of the most recent batch of Chromebox releases following this year's Google I/O, uses the Chrome browser as a base to take this one step further by having your entire desktop on these interconnected devices, with all your information instantly available. While it was a rocky start for Chrome OS and Chrome hardware, it has really matured over the past couple of years and the HP Chromebox includes some of the best lessons learned.

Firstly, the hardware design is very important for a Chromebox and HP gets it spot on. It's a

small, light device that is perfectly portable for wherever you need to set up, whether at the office or for home use. Once there, it supports the necessary standards for you to then actually work with it, such as the ubiquitous HDMI port and DisplayPort to hook it up to TVs and most modern monitors, along with conveniently located USB ports on the front for your input devices.

Not only is the HP Chromebox perfectly suited for portability, it's also just fine to be kept in one location. As well as the two USB ports on the front, there are multiple ones on the rear that allow for tidier cables and open up the front ports for connecting devices and mass storage.

The small form factor and ports make it useful for more than just office work, and with the right tweaking of Chrome OS it can be easily used as a pretty serviceable media centre or home theatre PC. You can control it from an Android

## Connectivity

Whether you're using it as a PC or media computer, being able to attach USB storage without fiddling around in the back is just convenient

## Expandable storage

The Chromebox only has a limited amount of storage, but it can be expanded with an SD card. It's also very easy to back up documents to Drive



good  
for...

## Working

There are a lot less distractions on the Chromebox, meaning you can get down to work





## Android integration

For the first time, Chromeboxes are now able to run Android apps, including Flipboard and Evernote. The box is also able to relay call alerts and notifications from your phone to your desktop

device or other computer easily enough, and with some perseverance a universal remote.

Performance-wise, it is one of the lowest-powered Chrome OS devices on the market. However, due to the nature of Chrome OS being very low-resource, you'll rarely if ever notice a problem. It boots up instantly to the login screen, and from there straight into Chrome OS. There's no booting from standby here, it's really just extremely fast.

Whereas in the past you would need a constant internet connection to do just about anything with Chrome OS, these days you can do important stuff offline, like writing documents. There's also some limited degree of file storage on the device's internal 16GB SSD, which can then be easily uploaded to Google Drive when you get a connection again. While Chrome itself is the main window into the majority of Chrome OS tasks, the Google team have seen enough sense to divorce the file manager and core settings from the browser to give it a more desktop-like feel.

Actual browsing works great. The apps and videos install and run just fine even on the lower-powered box, with 1080p YouTube video only being limited by your internet connection and not the machine's processor. It performs so well at the kind of things you'd use a Chromebox for that it makes us wonder why you'd get more powerful, expensive machines in the first place.

A recent addition to Chrome OS is the ability to run Android apps natively – this is a little misleading as these apps are being ported to Chrome OS rather than it having some kind of official Android emulation. The handful that have been released are located in the Chrome Store, like all the other apps and add-ons, and include things like Vine and Spotify. These have varying levels of usefulness on Chrome OS (for example, we found it's a bit tricky to angle a webcam at a cat to produce a million-loop Vine video), but it opens the door for a lot more capabilities.

The HP Chromebox really does everything it needs to and for a lot less money than some of the other offerings out there.

# Review

## HP Chromebox

# information

Price **£149**

» More information  
[www.hp.com](http://www.hp.com)

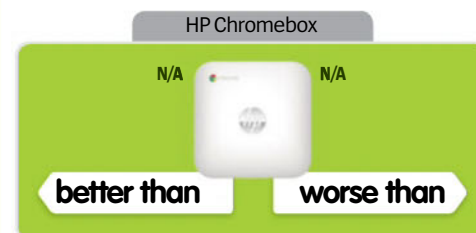
### Battery life N/A

The Chromebox requires a constant power source and does not have a battery backup



## technical specs

» Operating system	<b>Chrome OS</b>
» Processor	<b>Intel Celeron 2955U</b> <b>1.4GHz dual-core</b>
» Memory	<b>4GB DDR3 RAM,</b> <b>16GB SSD storage</b>
» Dimensions	<b>126 x 126 x 39mm</b>
» Weight	<b>0.64kg</b>
» Expansion slot	<b>microSD</b>



## Performance

It handles all its games and apps just fine at 1080p with no noticeable slowdown

## Design

It's sleek and well made, with excellent placement of I/O ports to make cable tidying as easy as possible

## Features

Chrome OS by definition is quite limited, and the ChromeBox only really has the bare minimum of ports

## Value for money

It's one of the cheapest Chromeboxes on the market, and performs just as well as some of the expensive ones

## » Verdict

A lovely little box that is relatively cheap and plenty powerful enough for running the excellent Chrome OS



### Portable office

With a small profile and a direct link to Drive, you can take your work almost anywhere

### Media centre

With a few tweaks and tricks, you can turn it into a pretty powerful media player for a home theatre

### Social media window

If you need a dedicated Twitter or Facebook feed, this is a cheap and powerful option



# Tech Top 20

From headphones to home monitoring kits, these are the must-have accessories for gadget lovers this year



## Anki Drive Starter Kit

» Price £149.99/\$149.99  
» More information [www.anki.com](http://www.anki.com)

After rolling out the expansive starter track, users can download the official Anki app and begin racing each other with the two accompanying cars. Apart from the racing side of things, there's a good amount of combat involved and you'll also find a range of weapons to help get the opposition off the track. The level of interaction is phenomenal and the more you play with Anki, the more weapons and upgrades you can unlock to use with your car. There are numerous expansion sets available to purchase and although they're expensive, they're certainly worth checking out.



## MiP

» Price £99.99/\$99.99  
» More information [www.wowwee.com/mip](http://www.wowwee.com/mip)

Who hasn't dreamt of having their own robot butler? MiP is a 7-inch robot capable of carrying small objects on its accompanying tray. Android users can download the MiP app from the Play Store and take part in a series of ingenious games with the little robot. It's incredibly difficult at first to manoeuvre MiP due to awkward controls, but once you've got the basics down, the rest is easy. The only real downside to MiP is that he eats up batteries really quickly—requiring four AAA batteries for five hours of fun.





## My Passport Wireless

» Price £109.99/\$139.99  
» More information [www.wdc.com](http://www.wdc.com)

The My Passport Wireless acts as a great tool to move files between smartphones and tablets, without the need for any cables. Although portable hard drives are in abundance, not many offer complete wireless functionality and compatibility with Android devices. One of the biggest positives of the My Passport drive is that it caters for any file types you may need moving – including those pesky .mkv files thanks to DLNA and UPnP support. There's also a streaming option, where users can stream videos from the drive directly onto their laptop or Android device.



## Native Union NIGHT Cable

» Price £34.99/\$39.99  
» More information [www.nativeunion.com](http://www.nativeunion.com)

If you're someone who constantly loses cables, or needs one with a much longer reach, then the NIGHT cable from Native Union is certainly for you. The 3-metre cable works with any Android device and includes a large anchored knot so that the charger sits in place. The knot can be moved up and down the cable, depending on where you want to store the cable when finished. What we especially liked about this specific cable was the braided exterior, which not only stops it from getting tangled but also looks great.



## Mipow Playbulb

» Price £59.99/\$79  
» More information [www.mipow.com](http://www.mipow.com)

Playbulb is an intriguing new Bluetooth speaker that doubles up as a safe and usable light bulb. Once screwed into your (standard E27) light fitting, the bulb connects to any Android device via Bluetooth and can then be used to stream music in the room. Sound quality is surprisingly good, but arguably not as clear as a standard Bluetooth speaker. Via the accompanying Android app, users can explore a range of lighting options and also personalise the bulb to their tastes. It's vastly more expensive than normal bulbs, but its wealth of features will persuade some to purchase.



## Top cases for your device

### Official Note 4 S View case

» Price £39.99/\$64.99  
» More info [mobilefun.co.uk](http://mobilefun.co.uk)

Samsung always produces fantastic cases for its devices, and the official Note 4 S View case is no different. A portion of the case has been cut out for users to get the time, or open up the Camera app.



### Glam Champagne for S5

» Price £25.00  
» More info [case-mate.co.uk](http://case-mate.co.uk)

Okay, so the Glam Champagne case for the Galaxy S5 is a bit too flashy for most, but it's solidly built and caters for the S5's numerous ports really well – even if the camera window is a little too wide.



### Otterbox Commuter Series

» Price £24.99/\$39.95  
» More info [otterbox.co.uk](http://otterbox.co.uk)

The Commuter series is a familiar face from Otterbox, but the newer versions for the HTC One (M8) and the Galaxy Alpha have been updated with flashy new colours and a smoother feel to them.



### LG G3 QuickCircle Snap On Casr

» Price £29.99/\$48.99  
» More info [mobilefun.co.uk](http://mobilefun.co.uk)  
What we like most about the QuickCircle case for the LG isn't its super-sleek design, but in fact the beautiful clock that appears on your screen when the case is closed. It's like having your very own pocket watch!



## KitSound Boom Evolution

» Price £199.99/\$TBC » More information [www.kitsound.co.uk](http://www.kitsound.co.uk)

Not only does the Boom Evolution offer Android users a fairly comprehensive speaker system, but also a series of docking features to help charge and connect your phone to your TV and other audio products. To cater for all of this, the Boom Evolution is a massive device not built to be portable, but it has several design features that make it a great-looking centrepiece for your home hi-fi system. The front-facing dial is used to easily navigate between the speaker's various modes, and both the Bluetooth and Aux-In support also work well. Sound quality was impeccable no matter what we played through it, and the power of the speaker helps to fill the room with sound. It certainly isn't cheap, but this is a whole lot more than a simple Bluetooth speaker.

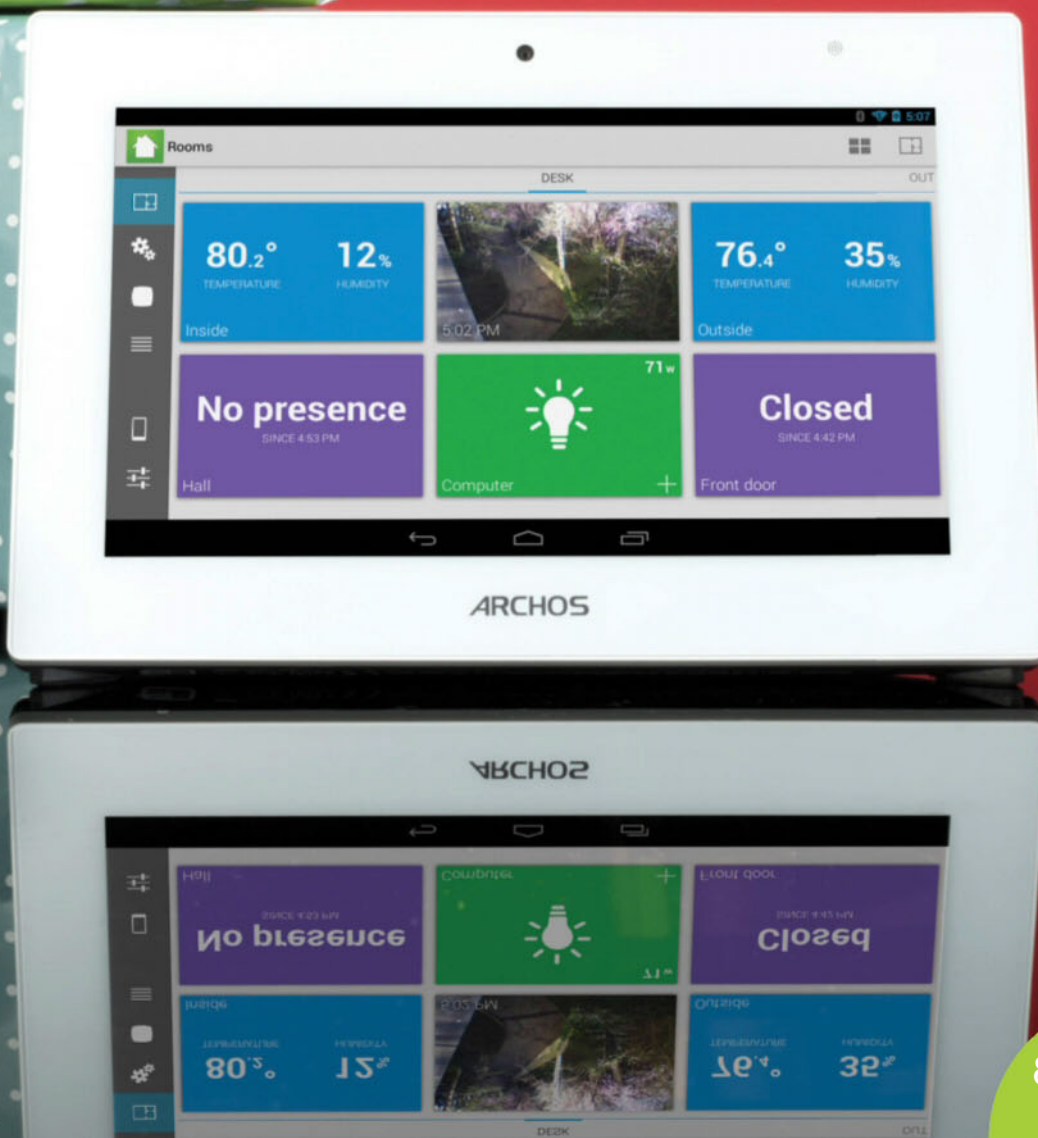




# Archos Smart Home

» Price £199.99/\$249 » More information [www.archos.com](http://www.archos.com)

As a cheaper way of monitoring your home while you're out, the Smart Home kit from Archos comes with an Android tablet, two cameras, motion sensors and also two temperature sensors. There's no denying that you get a lot for your money, even if the bundled tablet is a little on the chunky side. You'll use the tablet as the hub for all the monitoring, with each additional accessory connecting to it via Bluetooth. Once connected, users can set instructions and when one of them is met, you'll be alerted to it on the tablet. It's a surprisingly thorough and easy system to set up, but it can end up quite costly if you need to invest in more cameras or sensors. Still, the basics should be enough for most. Without going into too much detail on the tablet itself, this is a kit that works well and can offer enough security for those who want peace of mind while away from home.



## Olixar X2

» Price £59.99/\$97.99

» More information [mobilefun.co.uk](http://mobilefun.co.uk)

What makes the Olixar X2 headphones stand out from the rest is the NFC integration on offer. It's a suitable substitute for those who have issues using Bluetooth on their device. There's a real lightweight feel and look to the headphones and while they aren't made of the premium materials found in the BackBeat PROs, they're surprisingly comfortable to wear. For the small price you pay, sound quality is generally good albeit not spectacular. Volume levels are on the low side, but everything is as clear as it should be.



## Razer Adaro Wireless

» Price £129.99/\$149.99

» More information [razerzone.com](http://razerzone.com)

Compared to a lot of headphones on the market, the Adaros are definitely on the bulky side. However, when wearing them you really don't notice their size due to the cushioned ear pads and padded headband. Sound quality is great, but is best suited for those who want an enhanced experience when playing a game on their device. There's also Bluetooth connectivity, which is simple to set up, and you can expect to get a respectable eight hours of playback before needing to charge the wireless headphones via micro-USB.



## BackBeat PRO Wireless

» Price £199.99/\$249.99

» More information [plantronics.com](http://plantronics.com)

Although Plantronics is famed for its Bluetooth headsets, the BackBeat PRO headphones should be seriously considered as a must-have purchase. The lack of wires is always helpful and users can expect to go a full day without ever needing to reach for their charger. The headphones can feel quite heavy to wear at times, but it's a compromise we're happy to make when you consider the superb audio quality on offer. Everything sounds crisp and bass is a real highlight that should keep many audiophiles happy.





# Braven BRV-X

- » Price £199.99/\$199
- » More information [braven.com](http://braven.com)

Although the Braven BRV-X is unlikely to win any awards for beauty, its rugged exterior is perfect for those who like to take their music out and about. The rubberised coating is water and shock resistant, with the embedded screw cap housing a plethora of ports to explore. As with any Braven speaker, you expect to get high-quality audio, and that trend hasn't stopped here. It outshines the majority of the speakers in its price category and with a 5200mAh battery on board, the BRV-X will keep going for hours on end before needing a charge.



# Nakamichi NBS 10

- » Price £59/\$TBC
- » More information [nakamichi.co.uk](http://nakamichi.co.uk)

One of the defining features of the Nakamichi NBS 10 speakers is that each unit is capable of producing 360° sound, mainly thanks to the spherical design. Each speaker has a 2-inch driver within its casing, which certainly packs a punch and has enough bass to keep us happy. Although their primary use will be as speakers, the NBS 10s also include built-in microphones, making them a great tool for conference calls. On top of all that, you can't help but fall in love with the stylish design used here – they just look great!



## Gadgets for your home

### Chromecast

- » Price £30/\$35
- » More info [google.co.uk/devices](http://google.co.uk/devices)

The Chromecast has sold in its millions and rightly so, as it remains one of the cheapest and accessible ways of getting content from your phone over to your TV in just a few seconds.



### HTC RE

- » Price £TBC/\$199 pre-order
- » More info [htc.com](http://htc.com)

HTC's new GoPro-styled camera looks set to be the ultimate tool for the adventurer out there. With HTC's solid history in camera technology, we expect the RE to produce incredible footage.



### Amazon Fire Stick TV

- » Price £TBC/\$39
- » More info [amazon.co.uk](http://amazon.co.uk)

There's not much to choose between the Fire Stick TV and the Chromecast, but although Amazon's device is slightly more expensive, it does ship with its own remote to control your streamed content.



### Lapka Personal Environment Monitor

- » Price £229.50/\$249
- » More info [mylapka.com](http://mylapka.com)

The PEM from Lapka is the perfect tool for those wanting to have an accurate measurement of the weather and other conditions in and around their home. It's not cheap, but surprisingly useful.





# Android magazine™ BUYER'S GUIDE

Discover the best smartphones, tablets and accessories to buy in our top ten charts



For the most up-to-date reviews, head to [www.littlegreenrobot.co.uk](http://www.littlegreenrobot.co.uk)

THE LATEST ONLINE INCLUDE... HUAWEI HONOR » AMAZON FIRE HD 6 » VODAFONE SMART TAB 4



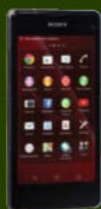
## TOP 10 SUPER SMARTPHONES THE BEST FLAGSHIP AND MID-RANGE ANDROID PHONES ON THE MARKET

1		<b>Moto X (2014)</b> While the previous Moto X had been something of a flagship underdog, the second-gen model has emerged as this year's must-have. A slightly larger screen size at 5.2 inches, metal chassis and the option to completely personalise your handset before you buy with the Moto Maker program, while remaining cheaper than its rivals and with a near stock experience enables Motorola to steal our top slot. The only downside is that the new Moto X still lacks a microSD slot to expand the memory.	£408  See issue 45	NEW ENTRY
2		<b>Sony Xperia Z3</b> Despite being made of reinforced glass and aluminium and completely waterproof, the Xperia Z3 is a very stylish all-terrain device and weighs little in the hand. The 20.7MP camera (also waterproof) is one of the best we've seen on a phone and the PlayStation Remote Play feature will appeal to gamers.	£515  See issue 44	GOING DOWN
3		<b>LG G3</b> Pipping Samsung, HTC and Sony to the post to launch the first next-gen device, the LG G3 has won us over with its pin-sharp QHD screen, laser-focused 13MP camera and lightning-fast processor. However, its faux metal plastic casing is disappointing, as is its mono speaker.	£492  See issue 41	GOING DOWN
4		<b>HTC ONE (M8)</b> A combo of a completely chrome unibody and a big, bright screen makes HTC's flagship phone one of the best-looking on the market. A pair of BoomSound speakers, FM radio, infrared TV remote and quick media-casting options make the HTC flagship a powerful and portable entertainment system.	£549.99  See issue 37	GOING DOWN
5		<b>Samsung Galaxy Alpha</b> Mimicking the iPhone's chamfered metal case, there is no denying the slim and sleek Alpha is Samsung's best-looking phone ever. Overall performance is strong and the advanced HDR Live camera feature is a plus; but even with a new set of power-saving tools, the battery is a bit small.	£579.95  See issue 43	GOING DOWN
6		<b>Samsung Galaxy Note 4</b> To look at, the Note 4 is a modest update on the Note 3, with a same-size display and continued emphasis on using the S Pen stylus. However, it has been revamped in almost every area. The TouchWiz interface handles better than ever, it has a 16MP camera, and has an extra long battery life.	£649.95  See issue 45	NEW ENTRY
7		<b>Samsung Galaxy S5</b> A relatively modest update on the Galaxy S4, the S5 is nonetheless an impressive handset. Its range of fitness features and thumbprint scanner give it a unique selling point, while its specs, though high, are slipping behind the latest-gen flagships. A rubber back and metal edging add a premium finish.	£466.80  See issue 38	GOING DOWN
8		<b>Google Nexus 5</b> As a Google product, the Nexus 5 is a long-term investment as it is guaranteed to have first pick of future updates to the Android OS. However, though it still performs well, in terms of specs – in particular the processor, camera and battery life – it's a lot less competitive than it used to be.	From £299  See issue 32	GOING DOWN
9		<b>Xiaomi Mi4</b> While OnePlus is the bigger name in Chinese exports, Xiaomi is selling millions of units in its home country. The Mi4 manages to undercut the OnePlus One on price, while maintaining impressive build quality. Like OnePlus, Xiaomi uses a non-standard OS, but it's equal to KitKat 4.4.	From £200  See issue 44	NEW ENTRY
10		<b>OnePlus One</b> This Chinese device offers flagship specs for a budget price. This includes a 2.5GHz quad-core processor and 3GB of RAM so that it can run multiple apps without lag, a 13MP camera and a large screen. The lack of an expandable memory and the CyanogenMod 11S OS will put some off, though.	From £269.99  See issue 41	GOING DOWN

In case you missed it... **Mid-range marvels** Read more in issue 38

### Sony Xperia Z1 Compact

» Price £275 » Website [www.sonymobile.com](http://www.sonymobile.com)  
 The 8MP camera lets this handset down, with inconsistent image quality. However, its specs are otherwise robust and it is also waterproof. Recently superseded by the Xperia Z3 compact, which is slightly larger.



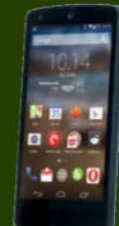
### HTC One Mini

» Price £264 » Website [www.htc.com](http://www.htc.com)  
 A slimmed-down version of the popular HTC One, the same great design is here with a metal case and BoomSound speakers. However, it lacks storage and boasts only a 720p screen resolution.



### Nexus 5

» Price £299 » Website [www.play.google.com](http://www.play.google.com)  
 Recently replaced by the bigger, better Nexus 6, the Nexus 5 still boasts Android Lollipop and a 1080p screen. However, speaker quality is mediocre and the camera doesn't impress.



### WINNER

### Motorola Moto X (2013)

» Price £245 » Website [www.motorola.com](http://www.motorola.com)  
 Recently replaced by the Moto X (2014), this older model is still a worthwhile purchase with a near stock Android experience.



# Buyer's Guide

## TOP 10 BUDGET BUYS IF YOU'RE SHOPPING FOR A SMARTPHONE ON A SHOE-STRING, CHECK OUT THESE LOW-COST MOBILE MUST-HAVES

1		<b>Moto G 4G</b> The Moto X's budget cousin set new standards for the low-cost phone with support for 4G. While it's made of a cheap plastic, the Moto G has not compromised on screen quality, which is 4.5 inches of sturdy Gorilla Glass 3 and offers 1280x720 pixels. The small memory can be boosted thanks to a microSD slot. Running near stock Android, Motorola has confirmed Moto G 4G's next upgrade will be Android L, ensuring future-proofing for some time despite the launch of a new Moto G (2014) model.	From £158  See issue 42	
2		<b>Moto G (2014)</b> While the second-gen Moto X has won us over, the Moto G (2014) has fallen short of the top due to a lack of 4G despite the similar price point. However, this is a trade-off if you would rather have the slightly larger five-inch screen or the useful addition of a dual SIM.	£149.99  See issue 44	NEW ENTRY
3		<b>Moto E</b> Available for under £100, SIM-free and no contract, the Moto E is the ultimate no-strings-attached smartphone. With a sturdy, splashproof case, 1980mAh battery that will go the distance and microSD slot to expand the tiny 1GB memory, the Moto E is an impressive build that won't break the bank.	£99  See issue 40	GOING DOWN ↓
4		<b>Samsung Galaxy Ace 3</b> While Samsung's high-end handsets get a lot of attention, the company has a much broader range. The Galaxy Ace 3 is now on its third incarnation, and at £174 it sits neatly in the budget to mid-range category. This is a 4G handset with a distinctive Samsung look and features.	£174  See issue 34	GOING DOWN ↓
5		<b>EE Kestrel</b> Only available from the EE network, its own-brand Kestrel phone is offering 4G data speeds at a very reasonable price. Produced by Huawei, the handset has a curved design, which gives it a unique flair. Good battery life ensures it can handle its quad-core engine and 4G's inevitable drain.	£100  See issue 40	GOING DOWN ↓
6		<b>HTC Desire 510</b> At 4.7 inches, with a budget price tag and LTE connectivity, this is HTC's answer to the Moto G 4G. However, cost-saving measures such as a 5MP camera and poor screen quality mean it just can't compete. HTC's Sense 6 UI is still here though, offering one of the best custom interfaces for Android.	£165  See issue 44	NEW ENTRY
7		<b>Acer Liquid Z5</b> A good-looking phone with tapered edges, the Acer Liquid Z5 offers a stylish alternative to most black brick handsets. Its innovative Float Apps interface also makes it easy to multitask apps. However, humdrum specs, like a low-res screen, leave it ranking low in the competitive world of budget phones.	£95  See issue 39	GOING DOWN ↓
8		<b>Nokia X</b> The announcement of a slimmer, faster Nokia X2 coming later this year has driven the Nokia X down, but this original Microsoft-Android hybrid still deserves attention. A bestselling handset in India and Pakistan, it has great build quality with a tough polycarbonate chassis available in a range of colours.	£89  See issue 38	GOING DOWN ↓
9		<b>Alcatel OneTouch Idol Mini</b> The understated style and low-end specs make the Alcatel OneTouch Idol Mini a great option for first-time or light users. SwiftKey as the default keyboard is a welcome addition; however, it's hard to justify the excessive bloatware on a phone that only has 4GB storage.	£79.99  See issue 39	GOING DOWN ↓
10		<b>Huawei Ascend Y300</b> While only offering a dual-core processor is going to damn this Huawei in the eyes of many potential buyers, it shouldn't be dismissed quickly. The well-reviewed Ascend Y530 is only a slight spec upgrade on the Y300, but is around double the price. Ideal for young or cash-strapped users.	£69.95  See issue 28	GOING DOWN ↓

## In case you missed it... Must-have launchers Read more in issue 44

### Themer

» Price Free

» Website

[www.play.google.com](http://www.play.google.com)

Spice up your homescreen with themes, icons and widgets. Hundreds of new themes are added each week, most of which are free. A handy feature also sorts your apps by type, making them easy to find.



### Buzz Launcher

» Price Free

» Website

[www.homepackbuzz.com](http://www.homepackbuzz.com)

Featuring over 500,00 user-created homescreens, Buzz Launcher includes sleek transactions and gesture controls. With a real emphasis on community, you can also view a list of trending apps and widgets.



### Go Launcher EX

» Price Free

» Website

[www.play.google.com](http://www.play.google.com)

Boasting an impressive range of screen transitions, including 3D effects, GO Launcher is one of the most popular options available on Google Play. Upgrade it for added bells and whistles.



### WINNER

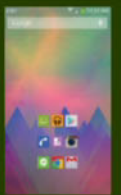
### Nova Launcher

» Price Free

» Website

[www.novalauncher.com](http://www.novalauncher.com)

Nova gives you the freedom to create your own launcher. It's packed with animation options, folder views and desktop behaviours, so you can create a setup that's as minimalist as you like.





## TOP 10 BEST TABLETS WHETHER YOU'RE LOOKING FOR A SEVEN OR TEN-INCH DISPLAY, THESE ARE THE TOP TABLETS AVAILABLE ON ANDROID

1		<b>Google Nexus 9</b> Larger than the Nexus 7, but more portable than the Nexus 10, Google's new tablet has an 8.9-inch display and a stylish form factor. Under the hood, a mighty Nvidia Tegra K1 processor and 3GB RAM mean that even running the most graphic-heavy games won't slow this 64-bit tablet down. Manufactured by HTC, the Nexus 9 also boasts BoomSound speakers, which ensure great sound quality, making this tablet an all-round media-consumption device.	From £319  See issue 45	<b>NEW ENTRY</b>
2		<b>Samsung Galaxy S Tab 10.5</b> Ultra thin and ultra bright, colours look vibrant and details distinct on this powerful Super AMOLED screen. Samsung's iPad slayer also puts many other Android tablets to shame, with a multi-window mode to display several apps at once and octo-core processor ensuring lightning-fast performance.	From £399  See issue 43	
3		<b>Sony Xperia Z2 Tablet</b> Arguably one of the most portable ten-inch tablets available, the Xperia Z2 Tablet is waterproof and can support a SIM card for 4G use. It is also surprisingly thin and light to carry and includes power-saving modes to ensure longer battery life. Reasonably high-spec, it has a whopping 3GB RAM.	From £394.99  See issue 39	
4		<b>Google Nexus 7 (2013)</b> Recently superseded by the Nexus 9, the Nexus 7 still offers a stock Android alternative for the mini tablet market, with the added benefit of running the latest Android OS and being first in line for upgrades. The downsides are its last-gen specs and lack of a microSD slot.	From £199  See issue 29	<b>GOING DOWN</b> 
5		<b>Google Nexus 10</b> Though it has never had the impact the Nexus 7 had, the larger Nexus 10 still offers a high standard for 10-inch Android tablets. A super high-resolution screen and powerful processor ensure that it regularly sells out on the Google Play Store, even if it does lack a 3G/4G option or expandable storage.	From £319  See issue 20	<b>GOING DOWN</b> 
6		<b>Tesco Hudl 2</b> This sequel to the supermarket chain's own-brand tablet has set a new benchmark for budget tablets. Uping the display size from 7 to 8.3 inches, the Hudl 2 also runs Android 4.4.2 KitKat and can handle anything you throw at it thanks to an Intel Atom processor.	£129  See issue 44	<b>NEW ENTRY</b>
7		<b>LG G Pad 8.3</b> A well-rounded tablet, the LG G Pad 8.3 offers solid specs with a selection of impressive built-in apps. These include Polaris Office so you can write documents on the go, and QPair, which shares your smartphone notifications to your tablet so you never miss important updates.	£199  See issue 40	<b>GOING DOWN</b> 
8		<b>Samsung Galaxy TabPRO 8.4 Wi-Fi</b> The smallest tablet in Samsung's collection, the TabPRO 8.4 proves that good things do come in small packages. A stunning 359ppi screen puts the Nexus 7 to shame, though we'd prefer higher-quality speakers. However, an 8MP camera and intuitive interface are good compensation.	£369  See issue 38	<b>GOING DOWN</b> 
9		<b>Samsung Galaxy Note 10.1 (2014)</b> While TouchWiz and the fake plastic stitching on the sides are disappointing, the new Note 10.1 does a good job of updating the original 2012 model. First and foremost is the addition of the popular S Pen stylus, with superb handwriting recognition and specialist features for drawing.	£475  See issue 35	<b>GOING DOWN</b> 
10		<b>Samsung Galaxy Note PRO 12.2</b> This titanic Samsung tab offers a gigantic 12.2-inch HD screen. The size and weight make it less portable and add a lot to the price, but drawing with the S Pen stylus feels very natural on the large canvas, while a blistering processor makes light work of running apps on the screen simultaneously.	£650  See issue 37	<b>GOING DOWN</b> 

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# DroidSupport

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qa@littlegreenrobot.co.uk

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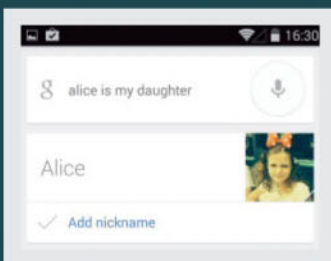
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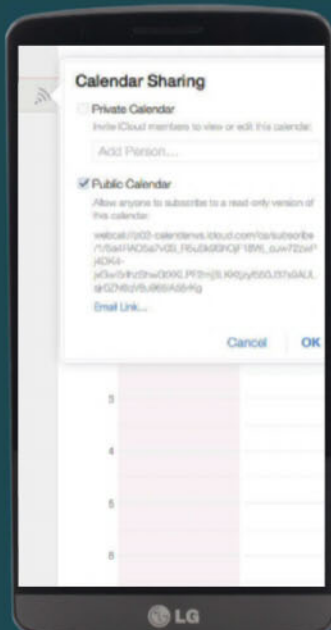
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## Did you know?

In Google Now, you can quickly build relationships by saying the name of a contact and the relationship. For example, "Alice is my daughter" will let you contact her whenever you like in the future without having to use her name. You can simply refer to her as 'my daughter'.



It's easy to create a file containing all of your iCloud calendar appointments

# How to move from iCloud to Google

"I am moving from an iPhone 4s to a new Galaxy S5 and want to be able to use my iCloud calendar with my new phone. How easy is it to either transfer the appointments over or access my iCloud account on the S5?"

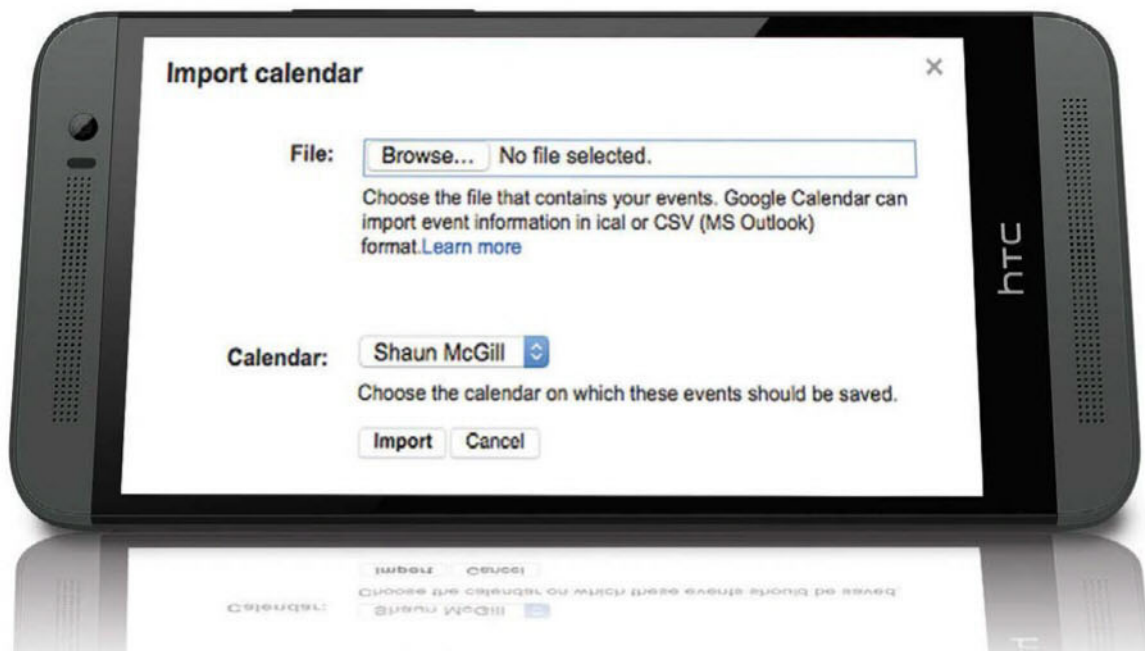
Joanne Kalvin

**A** Hi Joanne. We would advise to avoid trying to access iCloud data from an Android device and to instead look at migrating your calendar entries over to Google instead. Android is designed to work directly with Google services and it is a one-time process to transfer everything over so it will be quicker in the long run, but you will need to perform the export on a Mac or PC. Go to [icloud.com](http://icloud.com) and open your calendar as normal. In the left-hand panel, click the

wireless icon next to the calendar name and then click 'Public calendar'. Copy the web address that appears and paste it into a browser, and then replace 'webcal' at the start of the address with 'http'. Hit Enter and then save the file, which will be used to export all of your entries. Now open Google Calendar in your browser and click the cog icon over to the right, and then select Settings. Now click Calendars and then Import Calendar further down the page. Browse to the file you just saved

from iCloud, select it and then click Import. All of your calendar entries and appointments should now be imported to your Google Calendar; this may take some time, but once done you will have an exact replica of your iCloud calendar in the Google system which should work perfectly with the Galaxy S5 or indeed any other Android device. The new Google Calendar setup will be efficient, secure and very stable.

You should end up with a perfect calendar replica in Google instead of iCloud





## Ask your questions

Got a problem with your Android phone or tablet?  
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Get help from our  
Facebook community

## » email

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Send your questions for our team of  
experts to tackle

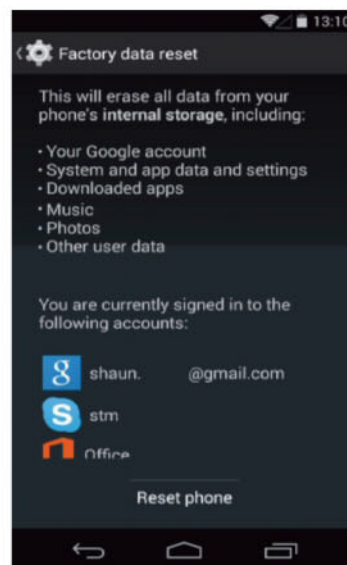
## Performing a factory reset remotely

"Help! My Moto G has a major fault and the screen is not working. I have bought a replacement and my friend wants to buy this one and try to fix it, but I cannot factory-reset it. Is it even possible?"

Shelby Smith

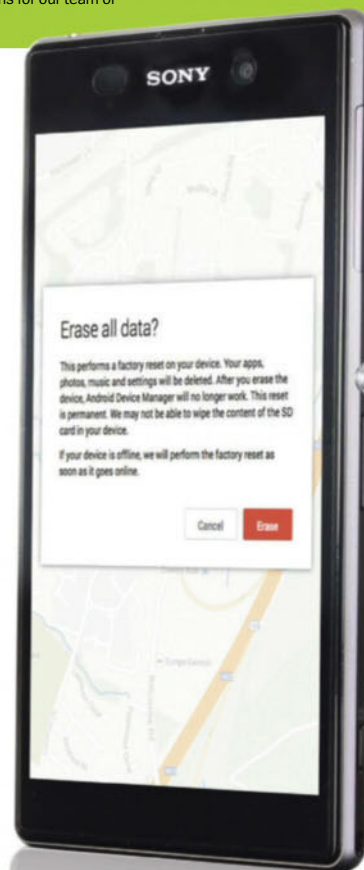
**A** Hi Shelby. Firstly, congratulations on managing to sell your device with a broken screen! We hope your friend is able to fix it and we understand the difficulties you are having, but we may have a solution that will work for you. With a bit of luck everything else is working on your Moto G, including the data connections, and we also hope that you previously connected to the relevant Google services for this trick to work. Go to <https://www.google.com/android/devicemanager> and give the service some time to locate your device. If everything is working as

it should, your Moto G will appear in the main screen with three options available to you. In this case, you will need to click the Erase icon and then confirm your choice. The software will now remotely wipe your device and you will be free to pass it on, safe in the knowledge that all of your personal information cannot be seen by anyone else. We would also advise going to Google Play on a desktop, selecting Settings and then clicking Edit next to your old Moto G. Now remove the tick in 'Show in menus' so that it does not appear in the future. If your Moto G cannot connect to the internet any more



A factory reset is straightforward if the screen works

then you may have problems, but it could still be worth connecting it to a desktop computer and looking at [www.sync-droid.com](http://www.sync-droid.com) as a possible way of restoring it through a PC. Good luck!



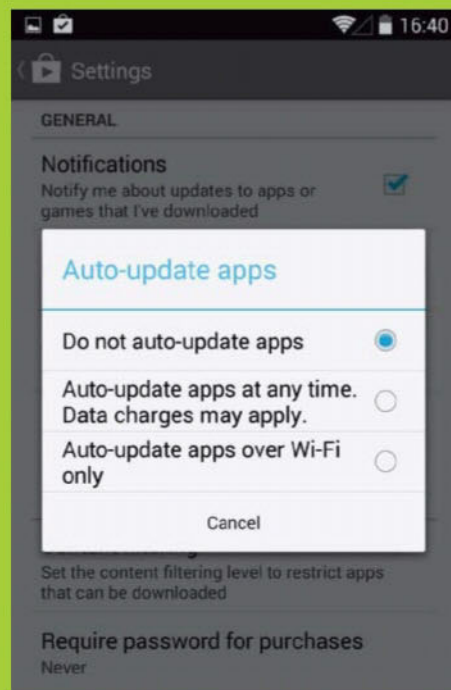
There is a way to reset without touching the phone at all

## hints & tips

Get more from your Android phone with our handy hints

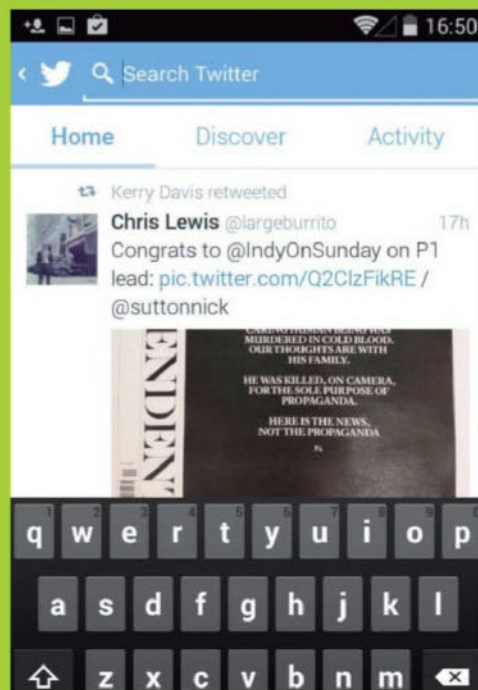
### 1 Stop auto-updating apps

You will likely have some apps that are crucial to you, but it is not always the case that updates will improve them. To be sure that automatic updates will not disturb your workflow, go to Settings in the Play Store and untick 'Auto-update apps'.



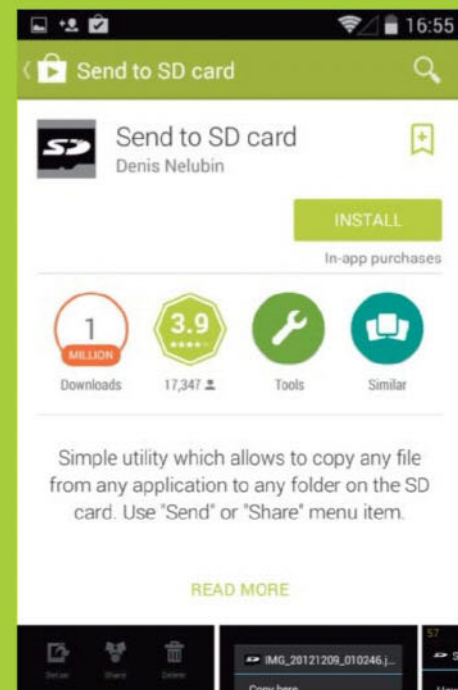
### 2 Deal with freezing keyboards

If you experience very slow performance when using the default keyboard, particularly when searching in the Twitter app, download the Google Keyboard app and your problems should go away immediately. It may be a Twitter app bug, but this solution should fix it.



### 3 Send images to SD card

On some devices, it is difficult to save images from Facebook and other services due to built-in limitations. Send to SD Card, available from Google Play, will get around this; tap an image, then menu>more>share and then select SD card to save it.



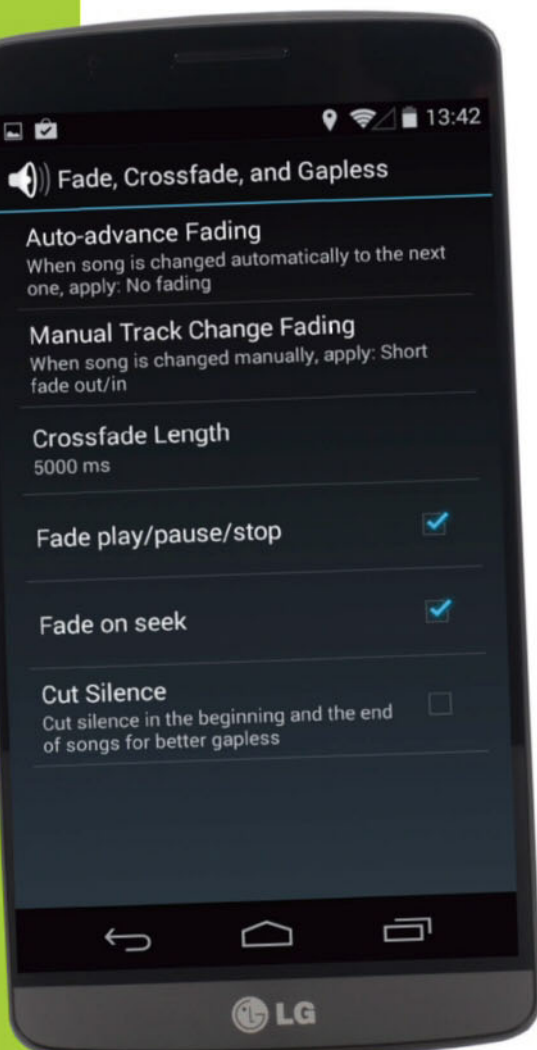
If an app is sending you too many notifications or you simply don't need them, hold your finger down on a notification and then select 'App info'. You can now untick the 'Show notifications' option to stop them appearing in the future. It is an all or nothing setting.

## Can I have gapless playback?

One feature I have always enjoyed on my mobile devices is the ability to use gapless playback when playing music. I have tried a few solutions on Android, but none of them seems to allow this at all?

*Jon Selly*

**A** Hi Jon. We understand your frustrations here and we too had some problems finding an app that would allow gapless playback, but we got there in the end. Take a look at Poweramp Music Player (Trial), available from Google



Gapless playback is possible on Android devices

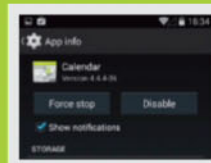
Play, and install it to see if it works for you. Tap the menu icon and then select Settings. Next, choose Audio and then 'Fade, Crossfade, and Gapless'. You can now set up the exact crossfade you require and of course have no gaps at all between the tracks when playing music. The interface is quite plain, but every control you need is included and this feature alone could make it your default app for all of your music playback. It's also a good example of a developer finding a way around a limitation that is present in some Android phones and tablets.

## I need the exact time!

In my job I need the exact time, to the second, to perform some crucial tasks and ideally I would like to use my Android phone to do this. It always seems to be out of time when I check it and I need to know if there are any settings I can tweak to make it deadly accurate?

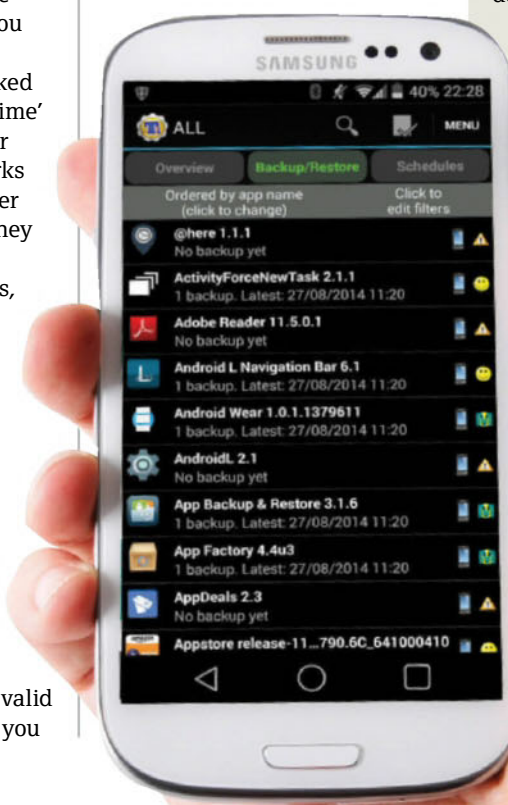
*Maurice Cauvelier*

**A** Hi Maurice. In theory your network provider should be able to provide accurate time to your phone if you have gone to Settings> 'Date & time' and checked the 'Automatic date & time' option. However, in our experience the networks do not always push over the correct time and they can tend to be a few seconds, if not minutes, out. There is no substantive way around this apart from complaining to them, but a solution could be a long time coming. Instead we would advise going to time.is in your mobile browser and setting a homescreen shortcut to it. Provided you have a valid internet connection, you



The time.is website is the best way to ensure you have the exact time

will be presented with the exact time for your location and also an indication of how far your device is from the correct time. There are apps available that offer to show the exact time using GPS or by other methods, but the service we recommend has been proven over a long period of time and always displays the exact time in an easy-to-read format. Enjoy your new accuracy.



## How to stop random reboots?

My HTC One is rebooting throughout the day and it seems to be completely random. I have tried everything I can think of, but there is no pattern as to when it happens and so I am thinking of sending it in for repair or trying a full reset. Do you have any other ideas as to what might be causing the problem?

*Kevin Barber*

**A** Hi Kevin. It would appear that you have already tried the obvious test, which is to see if there is a pattern, but a random reset can be one of the most difficult of all Android problems to fix. The random factor throws all standard tests out of the window and so we have a long process to go through to try to find out exactly what is causing the resets. We will detail what you should test in the related steps to this answer, but it is possible that you may have to do that a factory reset and then if there is no resolution, send it in for repair and a full analysis by HTC. Hopefully, however, we will help you find where the problem is and also that these answers may help others who are experience random reboots on other Android devices.

Random reboots are incredibly tricky to track down



## Share your tips

Got a great tip, or found a cool shortcut? Let us know!

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» **email**

qa@littlegreenrobot.co.uk  
Discovered anything good about your Android phone? Let us know!



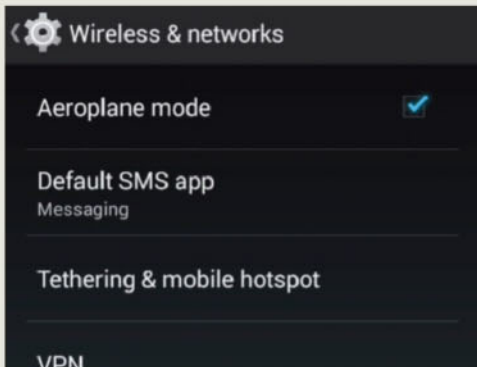
### 1 Check the battery

One potential problem that few people consider is that the battery could be loose in the device. Check it carefully to see if there is any movement – even on fixed batteries – and if so, try securing it with paper below the battery cover. Perform this check before you do anything else.



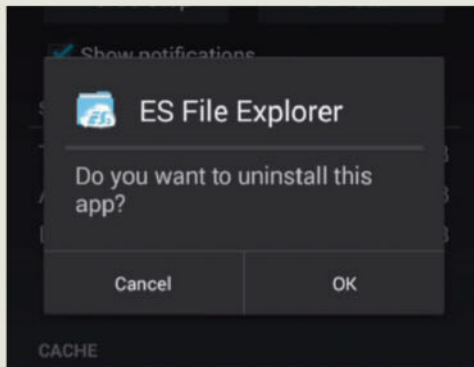
### 3 Keep a log

Use an app like Reboot Logger, which is free and available from Google Play, to see exactly when your device is rebooting. This should give you some data to work with which may help you ascertain if there is a specific software activity causing the reboots. It is a useful app to have installed anyway.



### 5 Lose all connections

We have heard tales of Wi-Fi and/or 3G connections causing reboots and the solutions for this are varied and often very difficult to track down. Try running the phone in Aeroplane mode for an extended period of time to see if that helps. If it does, you will have at least narrowed down where the problem lies.



### 2 Remove recent apps

Take a close look through the history of your app installs and try to judge when the random reboot problem started. If you can locate apps installed at the approximate time the issues began, you should uninstall them and see if this stops it from happening. Remove as many as you can to be sure.



### 4 Battery overheating?

There is an app called Battery Temperature Guard available in Google Play which is designed to stop your battery overheating. It may be that the battery in your device is faulty or it may be something else in the device causing it to work too hard. Either way, it is possible that this app will temporarily solve the problem.



### 6 Clean up potential viruses

It is unlikely that a virus or some malware has entered your device and is causing the reboots, but it would not hurt to install a free trial of a virus checker before you move to the factory reset. As we said, we are looking at every possibility and this is a useful final check.

# Android magazine

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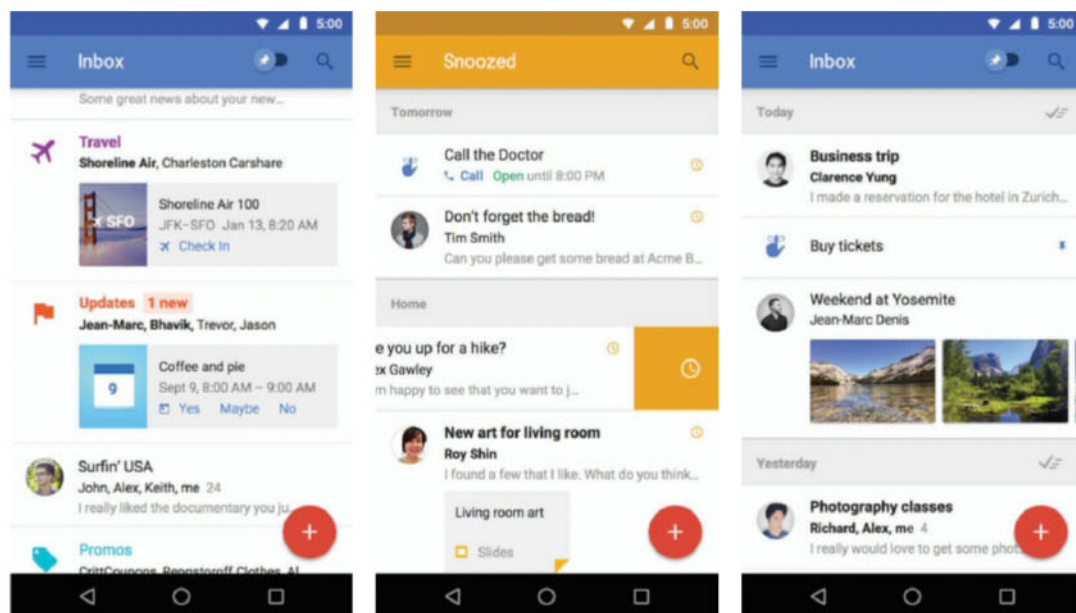
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## Bluffer's Guide

(Almost) everything you need to know about the latest tech in Android phones

# Google Inbox

### What is Inbox?

Inbox was created by the Gmail team, but is Google's attempt at making it easier to extract the useful information that is normally buried in the slew of emails we receive each day. Displayed in a stylish and intuitive Material Design interface, flight itineraries, event information, and photos emailed to you by friends will appear in your inbox before you even open emails, similar to Google Now cards. Emails are also sorted by type into Bundles and, if you don't have time to respond to an email immediately, you can create Reminders or Snooze messages so they reappear in your inbox when

you're ready to deal with them – whether later that day, next week, or whenever suits you.

### What does this mean for the future of Gmail?

Inbox represents a radical departure from how we are used to viewing our emails. If Facebook has taught us anything, it is that users do not like it when a service that they are accustomed to changes. By launching Inbox as a standalone app, Google is able to test the water. If users respond well to Inbox's intelligent email curation, it's possible Gmail will go the way of Google Reader. However, if they hate

it, Inbox may be abandoned like Google Wave, the company's ill-fated social collaboration tool.

### How do I sign up?

The Inbox by Gmail app is free to download from the Google Play store now. However, following in the footsteps of Mailbox's famous launch and Gmail's own early rollout, the service is currently invite-only. You can request an invite from within the app or email [inbox@google.com](mailto:inbox@google.com). If you know someone who uses Inbox already, they'll be given three invites they can share with others. Inbox is only compatible with a Gmail account.

## What you should say

» Ready-made opinions for you to cut out and keep

### The cynic

"Adding reminders, maps, photos, and more to my inbox only makes it look more cluttered"

"I have to constantly dip in and out of Bundles to find the email I want"

"Inbox's invite-only system is a cynical attempt to generate interest"

"With support for only one account, Inbox isn't suitable for power users"

### The supporter

"All the information I want from my email is available at a glance"

"The Snooze feature makes it easier to respond to an email at a time that suits me"

"Swipe controls make it quick and easy to achieve an empty inbox"

"Inbox doesn't have to replace Gmail – they can work well in tandem"

# NEXT MONTH

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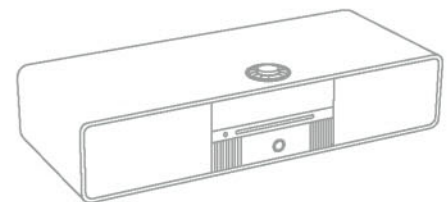
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